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ABSTRACT

Four essays discuss plans for and experimental stages of a 1965 social studies curriculum development program for grades 4-12, emphasizing rationale and educational objectives, and offering an overview of content and methodology. Chapter I describes the development work as stressing analysis and understanding of a human or social situation using varied methods and interpretations of the social sciences, investigation of the nature and meaning of forces shaping society, development of learning skills, values education, and opportunity for research and development. The program's intent was to emphasize the interaction of the quality of things learned with the quality of the intellectual experience acquired in learning. Chapter II examines the elementary school program. Using the overall theme of man, his nature, and the forces that shaped and continued to shape his humanity, the course focused on five humanizing factors and their interactions (tool-making, language, social organization, management of childhood, and man's urge to explain). Chapter III presents plans for the junior high curriculum. Using the theme "Man as a Political Being", three units are described: (1) Inventing the Western World, (2) From Subject to Citizen, and (3) The Civic Culture. These units stressed concepts of political power and political culture. Chapter IV discusses three parts of the high school social studies curriculum, which dealt with the impact of technology and science on society in the 19th century, the relation between ideology and reality in the 19th and 20th centuries, and a philosophical reflection on the nature of social studies. (CK)

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IN THE
SOCIAL STUDIES

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NEW CURRICULUM MODELS
FOR
HISTORY AND THE SOCIAL SCIENCES

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CHAPTER ONE

A Social Studies Program

Elting E. Morison

In the following pages the men who have assumed the intellectual direction of the Social Studies Program of Educational Services Incorporated describe the several parts of the Program. These descriptive essays were written in part to answer the questions most often put to us about matters of content and method.

There is a different kind of question, continuously put to us in one way or another, that goes beyond substance or procedure in search, apparently, of the justifiable purpose for this enterprise. The question comes in a variety of forms. Why are we doing what we are doing? Is it worth doing? What will become of it all if we go on doing it?

The simple answers are: we are doing it because, with or without attachment to results, it turns out to be, just in itself, very interesting work. And at least in our own intellectual interest well worth the doing. For those used to studying society from the sterilized base of a modern scholarly field to come a little closer to the contagion of the world's slow stain is no doubt a good thing. As for where it will all end, we do not know and indeed it seems that nobody can be sure. One man from whom we were seeking money thought it might prove to be merely "fun and games" while one of his own colleagues said that we were "the architects of a revolution."

Such simple answers may satisfy the curiosity about personal motivations, but they do not get to the end of a search for some greater purpose in the business of developing new course materials and new teaching methods for our schools. Nor do they supply evidence from which prudential judgement could be reached about the wisdom of sustaining this enterprise into even a limited future.

There are some great texts in support of anyone who seeks to improve the process of education - as opposed to the increase of knowledge - today. Half a century ago, H.G. Wells said that human history was becoming more and more a race between education and catastrophe. Some years later, Alfred North Whitehead said that today the rule was absolute: the society that did not value and nourish the trained mind would perish. And in this country, a republic, it is not enough to nourish the minds of the rich, the well born, the able, or of those modern aristocrats, those with scores of 700 or better in the MAT/SAT tests. Robert Winthrop put the general case very well in speaking 100 years ago of the emancipated negroes "Justice to them, the welfare of the States in which they live, the safety of the whole Republic, the dignity of the elective franchise, - all alike demand that the still remaining bonds of ignorance shall be unloosed and broken and the minds as well as the bodies of the emancipated go free."

Today, in a world with a future that will be governed more by ideas then by recollection of past experience, there will be a new and dangerous condition of servitude for all those whose minds do not go free. "Our purpose," as James B. Conant said, "is to cultivate in the largest possible number of our future citizens an appreciation of both the responsibilities and benefits which come to them because they are Americans and are free."

So much for great texts. They suggest ("catastrophe," "perish," "the safety of the whole Republic") that in the interests of survival, let alone "the great society," at least some of those near the top of the ivory tower, in the scholars' stalls and studies, would do well to have a care for the foundations; or, to put it another way, to concern themselves with what's going on in the schools.

Ever since we began, we have often been asked if we really do have any idea of what is now going on in the schools. We also have been exposed to a good many not necessarily expert witnesses with strong feelings. From K to 12, it is said, things in the social studies are "dull," "superificial," "sterilely descriptive," "irrelevant," and "repetitious." We will not recite on this matter in any detail, nor would it help much if we did. For one thing, too many general indictments - bad words and adjectival clauses - have already been fired at a system which in its totality is one of the most distinctive achievements of this society. In no other country, for instance, can any citizen obtain the kind of education at public expense that is here available for anyone capable of it from the Kindergarten through the highest graduate degrees. For another thing, it has become obvious to us that throughout this system there are at work, in some number gifted teachers and brave superintendents who have done remarkable things in their classrooms and schools. It is not possible, in view of these considerations, to indict the whole system. And even if it were, it would not be profitable to do so. The justification for efforts such as ours will not be found in generalized descriptions of how bad things are, but in demonstrations of how they might become better. And we do believe that by several small demonstrations we have already indicated that we can contribute, in important ways, to the general improvement of the teaching of social studies in the schools.

Our case may be stated in the following way. The object of courses in the social studies is to enable students to live as effectively and satisfyingly as possible in the society they will enter. To this end, students need to have some very specific information about themselves as human beings and about the past and present of the society they will enter. They also need to have some understanding of the general nature of all societies. They need to develop powers of analysis and of logical thought: they need also to develop the power of their intuitions and imaginations. They need, in other words, to feel strongly as well as think clearly and to tell the difference between the two. They need also to develop an awareness that articles of faith - which are often called a sense of values - are necessary regulators for the choices and actions any man has to take.

No doubt all those concerned with the educational process would come to easy agreement on these propositions. The purpose of our venture is to bring this set of platitudinous objectives somewhat closer to fulfillment. In so far as this suggests the need for curriculum change in the social studies, we can say that we have concentrated our efforts at the source of all such change - course materials. There are, of course, many elements in this process of change - from new school architecture to teacher training, from better testing schemes to novel theories of learning - but everything starts out - and is continuously governed by - what is taught. Our effort has been directed primarily to the development of new course materials - not the preparation of descriptive syllabi or bibliographies or guides to supplementary reading - but to the stuff itself.

In the selection and organization of the material we have sought to include, wherever appropriate, the findings of all the social sciences.

In the past fifty years, these fields have developed impressively as fields with special bodies of knowledge and special intellectual procedures. Taken collectively, they have considerably advanced our understanding both of man as an individual person and of men in society. Yet these advances have not been much reflected in the courses now being given in social studies in the schools. There is, for one thing, the inertia in any system which is without competitive stimulation or sufficient means to generate novelty within itself. There also is still something of a debate over the best means to introduce these social sciences. One way would be to offer them as particular courses of study - psychology, anthropology, economics, etc. - with discrete bodies of information and intellectual techniques to master. We have decided to bring them in, in a different way. Selecting first a human or social situation - either out of history or of current concern - we then try to analyze and understand the situation by making use of the varied methods and interpretations of the several social sciences. In this way, we hope to preserve in the student the sense that the prime object of study is man and his society and not an intellectual field.

We believe also that the selection and organization of the material itself facilitates the pursuit of this object of study. For one thing, the situations or occasions chosen are designed to enlarge a student's understanding of the elements in his own heritage that have continuing significance and of the conditions he will be dealing with in his life after school. Freed from too strict a chronological determinism in his courses, he will have increased opportunity to investigate the nature and meaning of the forces that give shape to the contemporary surroundings.

Furthermore, as often as possible, the student is presented with the raw materials of human or social situations - the documents, correspondence, pictures, statistics, and artifacts of the time. The opportunity for introducing intellectual order into these materials, for giving them shape and interpretation is given, as much as possible, to the student himself. Learning is assumed to be a joint venture between teacher and pupil in which the student can discover how to make up his own mind and sustain in a responsible way his own position. Considered pedagogically, this appears to make sense; the act of engagement, of transmuting the raw data by one's own efforts, cannot, we feel, but accelerate the learning process, and make more lasting the effect of the things learned and of the way in which the things were learned - the workings of the mind.

In such an exercise, we also believe, the student will have greater opportunity than ordinarily exists at present to deal with one of the most difficult matters in the field of social studies. This is the matter of value - good and evil, better and worse, right and wrong. Any human situation, any social situation or any political situation of use and interest contains, along with such things as crop failures, the birth rate, the flight of gold, and the state of the art, some questions about the quality of the end in view. It is idle to pretend that any series of human events arrange themselves unmodified by the pressures of what men feel to be worth while or not worth while. It is also idle to pretend that any retrospective attempt to describe the series of events can by any sterilizing process be freed of the predispositions of the describer. Even in the physical sciences the thing observed is subject to the distorting influence of the observer. Not to recognize this, not to take it into account, is to miss one of the governing elements in all social studies.

There are various ways to handle this problem. You can reconstruct a narrative so bland in its report as to lose all meaning and life. You can appear to subject human action to the servitude of scientific observation and simply describe all instances of choice and judgement as products - interesting local abberations - of cultural pressures and restrictions. A third - and better way we believe - is to engage the student as fully as may be in the meaning of a human situation by asking him to reconstruct it from its constituent parts. The act of discovering opposing views, or reconciling conflicting evidence, of tracing for himself the paths of indignation, faith, outrage, and hope through a tangled net of events should bring him closer to an understanding of the force in men's feelings of right and wrong. The exercise should also, since he is doing the work, bring him closer to an awareness and examination of his own feelings in these matters. And when a whole class is engaged in such an exercise, the opportunity to debate with each other (so the experimental tests we have conducted indicate) is greatly increased. Since in a stable republic all matters of value are ultimately resolved by the resolution of difference in debate, the practice of discussion in the classroom is perhaps the soundest civics.

Finally, this work with course materials must be taken as a piece of what is now called research and development. This means, for one thing, that we do not believe that the materials will ever leave our hands in a final form. They are presented, one hopes, in such a way that they are intellectually sound and satisfying in themselves, but also in such a way as to suggest continuous modification, extension and addition by students and teachers alike. They are supposed to contain the elements of intellectual life - not finished statements - and are therefore capable of change and growth in other hands and minds.

The fact that we are engaged in research and development means also something else besides the shape we try to give to the materials. Our original concern with course structure has led to a growing concern with the large question of learning. The practice of testing materials produced not only questions about the materials but questions about thinking and understanding. No existing theories served to satisfy the questions raised. Increasingly, therefore, the work which began simply as the development of new courses has become as well a series of experiments in the process of education. From these endeavours will come, in time we hope, some surer theoretical support than now exists for the selection of what kinds of things may best be studied when; how they can most easily and effectively be studied; who should study them and what further knowledge is needed by those who teach.

In the foregoing paragraphs are listed five specific elements in our work that will serve, we believe, to measurably strengthen the learning and teaching in the social studies. The question of what will become of an organization engaged in such an effort remains. As said before, prediction is difficult, but if events can be controlled at all by conscious intent, we would predict that this organization could usefully remain in being for some time to come without much change of either purpose or character. At least, for such a work of research and development, it is not now possible to state very precisely a point at which the work can logically end. At the moment, all the real demands upon the organization are for expansion and extension of effort; and, also at the moment, the demands are rapidly increasing rather than diminishing.

But limits of size and nature can be suggested and imposed more easily than those of time. We believe as an entity we should never depart from the task of research and development in course materials and methods of instruction. And we further believe that to do this work well we should remain a small organization intellectually independent of all the surrounding institutions - universities, school systems, schools of education, state agencies - that support us. We also believe we should act not as a single source but as a model for other new agencies in other parts of the country.

In speaking as we have of "a small organization," of "a model," of "research and development," we do not wish to suggest that we are pursuing local gains or minor purposes. Nor yet, fun and games. We believe that what we are doing is the most important thing anyone in our calling can do today. The greatest danger lying ahead in the unfamiliar, revolutionary future is that men with obsolete learning and modes of learning will lose the power to understand their surroundings or themselves in the midst of their novel surroundings. Meanwhile, the underachievers in the elementary grades, the dropouts in any high school, the pickets in Berkeley are giving the most obvious signals of the waste, frustration, and even contempt produced by the existing modes of learning. What seems to be required is a change in the process of education so profound that it will give students far better means to deal competently and wisely with the profound and startling changes in the world around them.

We wish to have as large a part as possible in this undertaking. When we speak of a small organization, we are thinking of the scale of the means and not of the extent of the effects. The kind of intellectual exercise we are engaged in goes better with small forces. But this exercise takes us to the center of the process of change. The quality of education depends directly and finally on the quality of the things learned and the quality of the intellectual experience acquired in the learning. By concentrating on these two interacting elements we believe that with limited means we can contribute to the making of large and general effects in a short time.

In seeking this end, we do not assume that the attractive power of the better mouse trap will be enough. It will take something more to move the large and complex system. We are part of an organization which in eight years has changed the way that over half the high school students learning physics in this country now study their subject. No other agency in the nation has had experience remotely comparable in dealing with all the elements that can be organized to produce rapid, large scale change in our educational process.

Change in the social studies is, no doubt, a larger harder thing than change in physics. It is also, in our view, more immediately important to achieve today. The resources at our disposal appear to give us a comparative advantage in the field. We hope to be able to sieze this advantage and by our action set in motion all the forces necessary to produce a new social studies curriculum in our schools.

CHAPTER TWO:
THE ELEMENTARY SCHOOL

Man: A Course of Study

Jerome S. Bruner

There is a dilemma in describing a course of study. One must begin by setting forth the intellectual substance of what is to be taught, else there can be no sense of what challenges and shapes the curiosity of the student. Yet the moment one succumbs to the temptation to "get across" the subject, at that moment the ingredient of pedagogy is in jeopardy. For it is only in a trivial sense that one gives a course to "get something across," merely to impart information. There are better means to that end than teaching. Unless the learner also masters himself, disciplines his taste, deepens his view of the world, the "something" that is got across is hardly worth the effort of transmission.

The more "elementary" a course and the younger its students, the more serious must be its pedagogical aim of forming the intellectual powers of those whom it serves. It is as important to justify a good mathematics course by the intellectual discipline it provides or the honesty it promotes as by the mathematics it transmits. Indeed, neither can be accomplished without the other.

We begin with an account of the substance or structure of a course in "social studies" now in the process of construction. The pedagogy follows. The aim of the exercise is to write a transitional first draft of the course, a common focus for those of us who have been trying to compose the course, trying to teach parts of it to children in Grade V. If the exercise is finally successful, we shall end with a completed course--with the materials, guides, films, and the other things that must be in the student's hands and on the teacher's shelf. There will be drafts in between. The exercise, we hope, will allow us to be clearer about what we are doing. In the final section we shall consider how we propose to get from a first draft such as this to a course that is ready for teaching.

Structure of the Course

The content of the course is man: his nature as a species, the forces that shaped and continue to shape his humanity. Three questions recur throughout:

What is human about human beings?

How did they get that way?

How can they be made more so?

We seek exercises and materials through which our pupils can learn wherein man is distinctive in his adaptation to the world, and wherein there is discernible continuity between him and his animal forbearers. For man represents that crucial point in evolution where adaptation is achieved by the vehicle of culture and only in a minor way by further changes in his morphology. Yet there are chemical tides that run in his blood that are as ancient as the reptiles. We make every effort at the outset to tell the children where we hope to travel with them. Yet little of such recounting gets through. Much more useful, we have found, to pose the three questions directly to the children so that their own views can be brought into the open and so that they can establish some points of view of their own.

In pursuit of our questions we shall explore five matters, each closely associated with the evolution of man as a species, each defining at once the distinctiveness of man and his potentiality for further evolution. The five great humanizing forces are, of course, tool-making, language, social organization, the management of man's prolonged childhood, and man's urge to explain. It has been our first lesson in teaching that no pupil, however eager, can appreciate the relevance of, say, toolmaking in human evolution without first grasping the fundamental concept of a tool or what a language is or a myth or social organization. These are not obvious matters. So we are involved in teaching not only the role of tools or language in the emergence of man, but as a necessary precondition for doing so, setting forth the fundamentals of linguistics or the theory of tools. And it is as often the case as not that (as in the case of the "theory of tools") we must solve a formidable intellectual problem ourselves in order to be able to help our pupils do the same.

While one readily singles out these five massive contributors to man's humanization, under no circumstances can they be put into airtight compartments. Human kinship is distinctively different from primate mating patterns precisely because it is classificatory and rests on man's ability to use language. Or, if you will, tool-use enhances the division of labor in a society which in turn affects kinship. And language itself is more clearly appreciated by reference to its acquisition in the uniquely human interaction between child and parent. And obviously, the nature of man's world view, whether formulated in myth or in science, depends upon and is constrained by the nature of human language. So while each domain can be treated as a separate set of ideas, as we shall see, success in teaching depends upon making it possible for children to have a sense of their interaction.

Language

Teaching the essentials of linguistics to children in the elementary grades has limits, but they are wider than we had expected. There are certain pedagogic precautions to be respected if ten-year-olds are to be captivated by the subject. It must not, to begin with, be presented as a normative subject--as an exercise in how things should be written or said. It must, moreover, be disassociated from such traditional "grammar" as the child has encountered. There is nothing so deadening as to have a child handle the "type-and order" problem by "recognizing" one category of words as "nouns" and parroting, upon being asked what he means by a noun, that it is a "person, place, or thing." It is not that he is either "right" or "wrong," but rather that he is as remote from the issue as would somebody be did they attempt to account for grief over the assassination of a President by citing the Constitution on the division of powers. And finally, the discussion needs to remain close to the nature of language in use, its likely origin, and the functions to which it is put.

Whether it is true or not that a ten-year-old has a complete grammatical repertory, he is certainly capable of and delighted in recognizing all linguistic features when confronted with instances of them. The chief aid to such recognition is contrast--the opportunity to observe the oppositional features that are so much a feature of human language. What comes hard is to formulate these features conceptually, to go beyond the intuitive grasp of the native speaker to the more self-conscious understanding of the linguist. It is this task--getting children to look at and ponder the things they can notice in their language long enough to understand them--that is most difficult and that should not be pushed to the point of tedium.

Our section on language includes a consideration of what communication is--by contrasting how humans manage and how animals manage to send and receive messages. The early sessions have proved lively and in the course of them nearly every major issue of linguistics is raised and allowed to go begging. This preliminary exercise has the great virtue that it can be repeated on later occasions, when students have achieved varying levels of sophistication, with the result that they readily recognize how much progress they have made.

The opening session (or sessions, for students often want to continue the arguments over animals and humans) usually highlights which among several openings can be best pursued in later units. What follows is influenced by far too little experience to be considered the general rule, but it is at least one example.

The discussion led naturally to the design features of a language. We designed a language game based on bee language, requiring the children to find hidden objects by using messages in this bee-like language. The children are encouraged to design similar languages and to improve on the design of the language used. They take to this readily and are eager to discuss and make clearer such design features as semanticity, voice-ear link, displacement, and cultural transmission. The game, of course, is a lead-in to the demonstration of bee-language as presented in the von Frisch film (which is not altogether satisfactory). We were struck, however, at how much more interested the children were in talking about their own language than in discussing bee language or von Frisch's analysis of it. It is as if the bee linguistics was interesting as a take-off into the closer analysis of their own language.

Our next objective is to present the powerful ideas of arbitrariness, of productivity, and of duality of patterning, the latter the exclusive property of human language. We have approached arbitrariness by the conventional route of comparing how pictures, diagrams, charades, and words refer to things. There are nice jokes to be used, as in the example given by Hockett of the tiny word whole referring to a big thing, while the large word microorganism refers to a tiny one. With respect to productivity, we have had considerable initial success with two exercises. The first is with a language containing four types (how, what, when, where) with a limited number of tokens of each type (e.g., by hand, by weapon, by trap, as tokens of the "how" type) and with a highly constrained set of orders each referring to a different kind of food-related activity. By this means we readily establish the idea of type and order as two basic ideas. They readily grasp the idea of substitutivity of tokens within a type. (Indeed, given the interest in secret codes based on substitution of words or letters for code breaking, they need little instruction on this score.)

Once the ideas of type and order are established, we begin the following amusing exercise to illustrate the intersubstitutability of language frames.

We present:

1	2	3	4	5
The	man	ate	his	lunch
A	lady	wore	my	hat
This	doctor	broke	a	bottle
My	son	drove	our	car

and the children are now asked to provide "matching" examples. They can do so readily. They soon discover that so long as they pick words in the order 1 2 3 4 5, from any place in each column, something "sensible" can be got--even if it is silly or not true like, "My doctor wore a car," or, "A lady ate a bottle," it is at least not "crazy" like, "Man the lunch his ate."

The students need no urging to construct new frames and to insert additional types into frames already set up (like a new first column the tokens of which include, did, can, has, etc.) Interesting discoveries are made--such as the relative openness of some positions and the closed nature of others. We hope to devise methods to help the children discover some of the deeper features of grammar, better to grasp what a language is--for example, that one can start with relatively simple sentence frames, "kernel sentences," and transform them progressively into negatives, queries, and passives or any two or even three of these, and that more complex forms can be returned to simpler forms by applying the transformations in reverse.

Finally, a game has been devised (a game involving signalling at sea) to illustrate duality of patterning, that most difficult feature of human language. It involves developing a language initially with a very limited set of building blocks (as with human languages, each of which combines intrinsically meaningless sound elements, phones, into a unique system that renders them into meaningful phonemes, a change in one of which will alter the meaning of a word so that, in English, rob and lob are different words, but not so in Japanese where /r/ and /l/ are allophones of the same phoneme just as plosive /p/ (pin) and non-plosive /p/ (spin) are "the same" for us but not for others). Three kinds of word blocks can be arranged in a frame, making twenty-seven possible "words" or lexemes. But there must be rules as to which combinations mean things and which not. It is very quickly apparent to the children that the blocks as such "mean" nothing, but the frames do--or some do and some do not. We are in progress of going from this point toward other aspects of duality as this is being written.

It is a natural transition to go from syntax to the question of how language is acquired by young humans and other primates. We shall use the considerable resources provided by recent studies of language acquisition to show the manner in which syntax emerges from certain very elementary forms such as the pivot-plus-open-class and the head-plus-attribute. The idea of "writing a grammar" for any form of speech encountered will also be presented. In addition, the child-adult "expansion-idealization" cycle will be explored as an example of a powerful form of social grouping that is crucial for transmitting the language. For contrast, we hope to examine the problems of language development of Vicki, a chimpanzee raised by a family along with their own child of like age. The subtle problem of "traditional" and "hereditary" transmission is bound to emerge.

Finally, and with the benefit of their newly-gained insight into the nature of language, we shall return to the question of the origins of human language and its role in shaping human characteristics. We hope first to cover the newly available materials on the universal characteristics of all human languages--first getting the children to make some informed guesses on the subject. Then we shall consider the role of language in the organization of the early human group and the effectiveness it might add to such group activities as hunting, given its design features and its universals. To go from this point to a consideration of myth and its nature is not a difficult step.

We have examined these matters in some detail here (though at that not closely enough). Our hope is to give the reader a concrete sense of how far we wish to go. It is plain that the section on language can take as much of a year as one wishes--including the whole time. We are overproducing materials better to sense what is possible and how to combine what is possible. Some schools may want to devote much time to language, and we hope to make it possible for them to do so. But above all, we hope to provide enough variety so that a teacher can choose an emphasis of his own, whether it be to increase self-consciousness about language or to impart a livelier sense of some distinctively human aspect of human language. In the first stages of our work, the tendency is to concentrate more on "getting the subject right"--in this case linguistics--than on getting the whole course constructed. And just as there is a tension between the requirement of the subject itself and those imposed by the need to teach it to children, so is there a necessary tension between the parts of our course (the five topics) and the whole (the nature and evolution of man). We shall return to this matter in discussing the summer workshop in a later section.

The section on language has required the collaboration of a variety of linguists of different stripe--pure, anthropological, psychological--but also of teachers, psychologists, film-makers, artists, and children. At that, it is hardly a quarter done as of this writing. Gloria Cooper of Harvard has directed the unit, with the aid of David McNeill of Harvard, Mary Henle of the New School, John Mickey of Colorado State, Betsy Dunkman of the Newton Schools, and Florence Jackson of the New York City Schools.

Tool Making

One starts with several home truths about children and "tools." They have usually not used many of them, and in general, tools will not be of much interest. This may derive from the deeper truth that, in general, children (like their urban parents) think of tools as set pieces that are to be bought in hardware stores. And finally, children in our technologically mature society usually have little notion of the relation between tools and our way of life. Production takes place in factories where they have never been, its products are so "packaged" as to minimize or cosmetize the production process that brought them into being.

As of this writing, the tool unit is still under discussion. What follows are some of the leading ideas that animate the design of the unit.

To begin with, a philosophical approach to the nature of tool-using. What is most characteristic of any kind of tool-using is not the tools themselves, but rather the program that guides their use. It is in this broader sense that tools take on their proper meaning as amplifiers of human capacities and implementers of human activity.

Seen as amplifiers, tools can be conceived to fall into three general classes--amplifiers of sensory capacities, of motoric capacities, and of ratiocinative capacities. Within each type there are many subspecies. There are sensory amplifiers like microscopes and ear horns that are "magnifiers," others, like spirit levels and bobs, that are "reference markers," etc. Some implement systems "stretch out" time (slow motion cinematography) and others condense it (time-lapse registration). In the realm of motoric amplifiers, some tools provide a basis for binding, some for penetrating, some even for steadying--as when one of our pupils described a draughtsman's compass as a "steadying tool." And, of course, there are the "soft tools" of ratiocination such as mathematics and logic and the "hard tools" they make possible, ranging from the abacus to the high speed digital computer and the automaton.

Once we think of tools as imbedded in a program of use--as implementers of human activity--then it becomes possible to deal with the basic idea of substitutability, an idea as crucial to language as it is to tools. If one cannot use or find a certain word or phrase, another near-equivalent can be substituted in its place. So too with tools: if a skilled carpenter happens not to have brought his chisel to the job, he can usually substitute something else in its place--the edge of a plane blade, a pocket knife, etc. In short, tools are not fixed, and the "functional fixedness" found by so many psychologists studying problem-solving comes finally because so much thinking about tools fixes them to convention--a hammer is for nails and nothing but nails.

Our ultimate object in teaching about tools is, as noted before, not so much to explicate tools and their significance, but to explore how tools affected man's evolution. The evidence points very strongly to the central part in evolution played by natural selection favoring the user of spontaneous pebble tools over those proto-hominids who depended upon their formidable jaws and dentition. In time, survival depended increasingly on the capacities of the tool-user and tool-maker--not only his opposable forefinger and thumb, but the nervous system to go with them. Within a few hundred thousand years after the first primitive tool-using appears, man's brain size more than doubles. Evolution (or more simply, survival) favored the larger brained creatures capable of adapting by the use of tools, and brain size seems to have been roughly correlated with that capacity. There are many fascinating concomitants to this story. Better weapons meant a shift to carnivorousness. This in turn led to leisure--or at least less roaming after roots--which in turn makes possible permanent or semi-permanent settlement. Throughout, the changes produced lead to changes in way of life, changes in culture and social organization, changes in what it is possible to do.

All of these matters are now superbly documented in Leaky's excavations in Olduvai Gorge in East Africa. We have consulted with him and he has expressed eagerness to edit four films for us on tool-making and its subsequent effects on the emergence of a new way of life. These are scheduled for the fall of 1965. If we are successful in getting our pupils to speculate about the changes in a society that accompany changes in technology, we will at least have fulfilled one of the original aims of the Social Studies Program: to get across the idea that a technology requires a counterpart in social organization before it can be used effectively by a society.

There happen also to be new materials available on the burgeoning technology of the Magdalenian period when more decorative features appear and tool-makers begin to specialize. We are exploring this work to see whether it too can be used in the same spirit.

A few of the exercises being planned to the "tool section" give some flavor of the pedagogy. One unit calls for the taking of a "census of skills"--the tasks that children know how to perform, along with some effort to examine how they were learned (including tool skills). Another unit consists of trying to design an "all-purpose" tool so that the children can have some notion of the programmatic questions one asks in designing a tool and why specialized use has a role.

There will also be an opportunity (of which more in a later section) for the children to compare "tool play" of an Eskimo boy and Danai boy of New Guinea with the play of immature freeranging baboons, macaques, and chimpanzees. We are also in process of obtaining films on the technique of manufacture of flint implements and hope also to obtain inexpensive enough materials to have our pupils try their hand at flint knapping and other modes of instrument making, guided possibly by films on the subject by the distinguished French archeologist, Dr. Bordes.

There will be some treatment of tools to make tools to make tools, as well as of tools that control various forms of natural power. A possible route into this discussion is an overview of the evolution of tool-making generally--from the first "spontaneous" or picked-up tools, to the shaped ones, to those shaped to a pattern, to modern conceptions of man-machine relations as in contemporary systems research. Indeed, if we do follow this approach we shall also explore the design of a game of tool design involving variables such as cost, time, gain, specificity of function, skill required, etc., with the object of making clear the programmatic nature of tools and manner in which tools represent selective extensions of human powers.

Social Organization

The section on social organization is still in preliminary planning, save in one respect, where work is quite well advanced. The unit has as its objective to make children aware that there is a structure in a society and that this structure is not fixed once for all. It is an integrated pattern and you cannot change one part of the pattern without other parts of the society changing with it. The way a society arranges itself for carrying out its affairs depends upon a variety of factors ranging from its ecology at one end to the irreversible course of its history and world-view at the other.

A first task is to lead children to recognize explicitly certain basic patterns in the society around them, patterns they know well in an implicit, intuitive way--the distinction between kin and other, between face-to-face groups and secondary groups, between reference groups and ones that have corporate being. These, we believe, are distinctions that children easily discover. We should also like the children to grasp the rather abstract fact that within most human groups beyond the immediate family, continuity depends not so much upon specific people, but upon "roles" filled by people--again, as with language and tool-use, there are structures with substitutability.

Such social organization is marked by reciprocity and exchange--cooperation is compensated by protection, service by fee, and so on. There is always giving and getting. There are, moreover, forms of legitimacy and sanction that define the limits of possible behavior in any given role. They are the bounds set by a society, and do not depend upon the individual's choice. Law is the classic case, but not the only one. One cannot commit theft legally, but then too one cannot ignore friends with impunity and law has nothing to do with it.

A society, moreover, has a certain world view, a way of defining what is "real," what is "good," what is "possible." To this matter we turn in a later section, mentioning it here only to complete our catalogue of aspirations of ideas we hope to introduce in this part of the course.

We believe that these matters can be presented to children in a fashion that is gripping, close to life, and intellectually honest. The pedagogy is scarcely clear, but we are on the track of some interesting ways of operating. One difficulty with social organization is its ubiquity. Contrast may be our best way of saving social organization from obviousness--by comparing our own forms of social organization with those of baboon troops, of Eskimo, of Bushmen, of prehistoric man as inferred from excavated living floors in Europe and East Africa. But beyond this we are now developing a "family" of games designed to bring social organization into the personal consciousness of the children.

The first of these games, "Hunting," is designed to simulate conditions in an early human group engaged in hunting and is patterned on the life and ecology of the Bushmen of the Kalahari desert. The elements of the game are Hunters, Prey, Weapons, Habitats, Messages, Predators, and Food. Without going into detail, the game simulates (in the manner of so-called Pentagon games used for increasing the sensitivities of generals) the problem of planning how far one wishes to go in search of various kinds of game, how resources need to be shared by a group to get beyond "varmint" hunting to larger game, how differentiation of labor can come about in weapon making and weapon using, how one must decide among different odds in hunting in one terrain or another. Given the form of the game (for which we are principally grateful to Dr. Clark Abt), its content can be readily varied to fit the conditions of life of other hunting groups, such as the Eskimo, again with the object of contrast.

What has proved particularly interesting in our early work with the game is that it permits the grouping of a considerable amount of "real" material around it--accounts of the life of the Kalahari Bushmen (of which there is an extraordinarily rich record on film and in both literary and monographic form), their myths and art, the "forbiddingly" desert ecology that is their environment. And so too with the Eskimo, should he go ahead to construct an analogue game for them, for we are in possession of an equally rich documentation on the Netsilik Eskimo of Pelly Bay. Indeed, one of the documentary films made by the E.S.I. Studio in collaboration with the Canadian Film Board and Dr. Asen Balikci of the University of Montreal (one of seven half-hour films to be "cut" from our 100,000 feet of film) has already received international acclaim.

Finally, and again by contrast, there now exists a vast store of material on the social organization of higher primates--a considerable portion of which is also in film shot by a crew under Dr. Irven DeVore of Harvard for E.S.I.--that serves extremely well to provoke discussion on what is uniquely human about human social organization.

The group now at work on Social Organization consists of Edwin Dethlefsen of Harvard, Mr. Richard McCann, on leave from the Newton Schools, and Mrs. Linda Braun of the E.S.I. staff.

Child Rearing

This unit has just begun to take shape at the time of writing. It is proceeding on three general themes in the hope of clarifying them by reference to particular materials in the areas of language, of social organization, of tool-making, and of childhood generally. The first general theme is the extent to which and the manner in which the long human childhood (assisted as it is by language) leads to the dominance of sentiment in human life, in contrast to instinctual patterns of gratification and response found to predominate at levels below man. That is to say, affect can now be aroused and controlled by symbols--human beings have an attitude about anger rather than just anger or not anger. The long process of sentiment formation requires both an extended childhood and access to a symbolized culture through language. Without sentiment (or values or the "second signal system" or whatever term one prefers) it is highly unlikely that human society or anything like it would be possible.

A second theme is organized around the human (perhaps primate) tendency toward mastery of skill for its own sake--the tendency of the human being, in his learning of the environment, to go beyond immediate adaptive necessity toward innovation. Recent work on human development has underlined this "push toward effectance," as it has been called. It is present in human play, in the increased variability of human behavior when things get under control. Just as William James commented three-quarters of a century ago that habit was the fly-wheel of society, we can now say that the innovative urge is the accelerator.

The third theme concerns the shaping of the man by the patterning of childhood--that while all humans are intrinsically human, the expression of their humanity is affected by what manner of childhood they have experienced.

The working out of these themes has only begun. One exercise now being tried out is to get children to describe differences between infancy, childhood, and adulthood for different species--using live specimens brought to class (in the case of non-human species) or siblings for humans. For later distribution, of course, the live specimens (and siblings) will be rendered on film. Yet the success of a session, say, with a ten-day old stud-tailed macaque suggests that the real thing should be used when possible.

Dr. Balikci will be cutting a film on Eskimo childhood from the Netsilik footage, and comparable films on baboon and Japanese macaque childhood will also be in preparation. Beyond this there is still little to report. Dr. Richard Jones of Brandeis is in charge of the unit, assisted by Miss Catherine Motz, on leave from Germantown Friends School, and Mrs. Kathy Sylva, and Mrs. Phyllis Stein of E.S.I.

World View

The fifth unit in preparation concerns itself with man's drive to explicate and represent his world. While it concerns itself with myth, with art, with primitive legend, it is only incidentally designed to provide the stories, the images, the religious impulses, and the mythic romance of man's being. It would be more accurate to describe the unit as "beginning philosophy" in both senses of that expression--philosophy at the beginning and, perhaps, philosophy for young beginners.

Central to the unit is that men everywhere are humans, however advanced or "primitive" their civilization. The difference is not one of more or less human, but of how particular human societies express their human capacities. A remark by the French anthropologist, Levi-Strauss puts it well.

> Prevalent attempts to explain alleged differences between the so-called primitive mind and scientific thought have resorted to qualitative differences between the working processes of the mind in both cases, while assuming that the entities which they were studying remained very much the same. If our interpretation is correct, we are led toward a completely different view--namely, that the kind of logic in mythical thought is as rigorous as that of modern science, and that the difference lies, not in the quality of the intellectual process, but in the nature of things to which it is applied. This is well in agreement with the situation known to prevail in the field of technology: What makes a steel ax superior to a stone ax is not that the first one is better made than the second. They are equally well made, but steel is quite different from stone. In the same way we may be able to show that the same logical processes operate in myth as in science, and that man has always been thinking equally well; the improvement lies, not in the alleged progress of man's mind, but in the discovery of new areas to which it may apply its unchanged and unchanging powers.

All cultures are created equal. One society--say, that of Eskimos--may have only a few tools, but they are used in a versatile way. The woman's knife does what our scissors do, but it also serves to scrape hides, clean and thin them, etc. The man's knife is used for killing and skinning animals, carving wood and bone, cutting snow for building blocks for the igloo, chopping meat into bites. Such simple weapons are "the mother of tools," and by specialization a number of tools derive from them. What is "lost" in variety of tools is won in the versatility of uses; in brief, the Eskimo couple has tools for all its tasks and can keep them on them at all times.

So too with symbolic systems. The very essence of being human is in the use of symbols. We do not know what the hierarchy of primacy is between speech, song, dance, and drawing; but whichever came first, as soon as it stood for something else than the act itself, man was born; as soon as it caught on with another man, culture was born, and as soon as there were two symbols, a system was born. A dance, a song, a painting, and a narrative can all symbolize the same thing. They do so differently. One way of searching for the structure of a world view is to take an important narrative and to see what it ultimately tells. A narrative, or at least a corpus of narratives, may be what philosophy used to be. It may reflect what is believed about the celestial bodies and their relation to man, it may tell how man came into being, how social life was founded, what is believed about death and about life after death, it may codify law and morals. In short, it may give expression to the group's basic tenets on astronomy, theology, sociology, law, education, even esthetics.

In studying symbolic systems, we want the students to understand myths rather than to learn them. We will give them examples from simple cultures for the same reason for which the anthropologist travels into an isolated society. Our hope is to lead the children to understand how man goes about explicating his world, making sense of it and that one kind of explanation is no more human than another.

We have selected, for our starting point, some hunting societies. An Eskimo society, a Bushman society, an Australian aboriginal society will certainly suffice to show what the life experience of hunting peoples is. From the scrutiny of the myths of these groups, it is immediately clear that you can tell a society by the narratives it keeps. The ecology, the economy, the social structure, the tasks of men and women, and the fears and anxieties reflect in the stories, and in a way which the children can handle. One good example of Eskimo narrative or Eskimo poetry, if skillfully handled in class, can show the child that the problems of an Eskimo are like our problems: to cope with his environment, to cope with his fellow men, and to cope with himself. We hope to show that wherever man lives, he manages not only to survive and to breed, but also to think and to express his thoughts. But we can also let the children enjoy the particulars of a given culture, and we shall--the sense of an alien ecology, the bush, or ice and snow, and a participant understanding for alien styles.

We introduce an origin myth, things taking their present order, the sun shining over the paths of the Bushmen, and the Bushmen starting to hunt. But we should equip with some possible theories to make the discussion profitable, a theory not in words, but in a way of reading and understanding a myth. If the narrative is to be called a myth, it is radically different from how things are now. There has been a change in state. It is possible to devise ways for children to analyze a plot. If done with one story variant only, such an analysis may yield something akin to a phrase-structure grammar; if done with a group of myths, something comparable to a transformational grammar. It is intriguing to see how stories change. Children know such things intuitively and can be helped to appreciate them more powerfully.

One last thing: why should such things be taught so early? Why not postpone them until the student can handle the "theory" itself, not only the examples? There is a reason: if such things are new to a twenty-year-old, there is not only a new view to learn, but an old established view to unlearn. We want the children to recognize that man is constantly seeking to bring reason into his world, that he does so with a variety of symbolic tools, and that he does so with a striking and fully rational humanity. It is a big order, but worth the try. The unit on world view is under the direction of Dr. Elli Maranda, aided by Mr. Pierre Maranda and assisted by Miss Bonnie McLane.

Pedagogy

The most persistent problem in social studies is to rescue the phenomena of social life from familiarity without, at the same time, making it all seem "primitive" and bizarre. Three techniques are particularly useful to us in achieving this end. The first is contrast, of which much has already been said. The second is through the use of "games" that incorporate the formal properties of the phenomena for which the game is an analogue. In this sense, a game is like a mathematical model--an artificialized but often powerful representation of reality. Finally, we use the ancient approach of stimulating self-consciousness about assumptions--hopefully going beyond mere admonition to think. We believe there is a learnable strategy for discovering one's unspoken assumptions.

Before considering each of these, a word is in order about a point of view quite different from ours. It holds that one should begin teaching social studies by presenting the familiar world of home, the street, and the neighborhood. It is a thoroughly commendable ideal; its only fault is its failure to recognize how difficult it is for human beings to see generality in what has become familiar. The "friendly postman" is indeed the vicar of federal powers, but to lead the child to the recognition of such powers requires many detours into the realm of what constitutes power, federal or otherwise, and how, for example, constituted power and willfully exercised force differ. We would rather find a way of stirring the curiosity of our children with particulars whose intrinsic drama and human significance are plain--whether close at hand or at a far remove. If we can concurrently activate a passion for bringing order into what has been studied, the task is well started.

A word first about contrast. We hope to use four principal sources of contrast: man versus higher primates, man versus prehistoric man, contemporary technological man versus "primitive" man, and man versus child. We have been gathering materials relevant to each of the contrasts--film, stories, artifacts, readings, pictures, and above all, ideas for pointing up contrasts in the interest of achieving clarity.

Indeed, we often hope to achieve for our pupils a sense of continuity by presenting them first with what seems like contrast and letting them live with it long enough to sense wherein what before seemed bizarrely different is, in fact, closely akin to things they understand from their own lives. So it is particularly with our most extensive collection of material, a film record taken through the full cycle of the year of a family of Netsilik Eskimo. The ecology and the externals are full of contrast to daily life in an American or European setting. But there is enough material available to go into depth, to work into the year's cycle of a single family so that our pupils can get a sense of the integrity not only of a family, but of a culture. It is characteristic of Netsilik Eskimo, for example, that they make a few beautifully specialized tools and weapons, such as their fishing lester or spear. But it is also apparent that each man can make do with the stones he finds around him, that the Eskimo is a superbly gifted bricoleur. Whenever he needs to do something, improvised tools come from nowhere. A flat stone, a little fish oil, a touch of artic cotton and he has a lamp. So while the Eskimo footage puts modern technological man in sharp contrast, it also serves perhaps even better, to present the inherent, internal logic of a society, any society. Each has its own approach to technology, to the use of intelligence.

Games go a long way toward getting children involved in understanding language, social organization, and the rest; they also introduce, as we have already noted, the idea of a theory of these phenomena. We do not know to what extent these games will be successful, but we shall give a careful tryout. Their alleged success in business management and military affairs is worth extrapolating!

As for stimulating self-consciousness about thinking and its ways, we feel that the best approach is through stimulating the art of getting and using information--what is involved in going beyond the information given and what makes it possible to take such leaps. Crutchfield has produced results in this sphere by using nothing more complicated than a series of comic books in which the adventures of a detective, aided by his nephew and niece, are recounted. The theme is using clues cleverly. As children explore the implications of clues encountered, their general reasoning ability increases, and they formulate more and better hypotheses. We plan to design materials in which children have an opportunity to do this sort of thinking with questions related to the course--possibly in connection with prehistoric materials where it will be most relevant. If it turns out to be the case that the clothing that people wore was made from the skins of the ibex, what can they "postdict" about the size of a hunting party and how would they look for data? Professor Leaky informs us that he has some materials that can be put to good use in this respect.

Children should be at least as self-conscious about their strategies of thought as they are about their attempts to commit things to memory. So too the "tools" of thought--what is explanation and "cause" and the rest. One of those tools is language--perhaps the principal one. We shall try to get children to have a look at language in this light.

The most urgent of all is to give our pupils the experience of what it is to use a theoretical model, with some sense of what is involved in being aware that one is trying out a theory. We shall be using a fair number of rather sophisticated theoretical notions, in intuitively rather than formally stated form, to be sure, but we should like to give children the experience of using alternative models. This is perhaps easiest to do in the study of language, but it can also be done elsewhere.

We shall, of course, try to encourage students to discover on their own. Children surely need not discover generalizations on their own, obviously. Yet we want to give them enough opportunity to do so to develop a decent competence at it and a proper confidence in their ability to operate on their own. There is also some need for the children to pause and revisit to recognize the connections within what they have learned--the kind of internal discovery that is probably of highest value. The cultivation of such a sense of connectedness is surely the hub of our curriculum effort.

If we are wildly successful, we would hope that we would have achieved five ideals:

1. To give our pupils respect for and confidence in the powers of their own mind.

2. To give them respect for and confidence in their powers of thought concerning the human condition, man's plight and his social life.

3. To provide them with a set of workable models that make it simpler to analyze the nature of the social world in which they live and the condition in which man finds himself.

4. To impart a sense of respect for the capacities and plight of man as a species, for his origins, for his potential, for his humanity.

5. To leave the student with a sense of the unfinished business of man's evolution.

The Form of the Course

It is one thing to describe the nature of a course in terms of its underlying discipline and its pedagogical aims, and quite another to render these hopes into a workable form for real teachers in real classes. Teachers are sufficiently constrained by their work loads so that it would be vain to hope they might read generally and widely enough in the field to be able to give form to the course in their own terms. The materials to be covered in this particular course, moreover, are so vast in scope as to be forbidding. The materials, in short, have got to be made usable and attractive not only to the highly gifted teacher, but to teachers in general, and to teachers who live with the ordinary fatigue of coping with younger pupils day by day. They cannot be overburdened with reading, nor can the reading be of such an order as to leave them with a feeling of impotence. At the same time, the material presented should be loosely enough woven to permit the teacher to fulfill his or her own interests in forming a final product to be presented to children.

That much said, we can state what we mean by a unit, the elements of which the course is made. A unit is a body of materials and exercises that may occupy several days of class time, half a class period, or somewhere in between. In short, it can be played to the full and consume a considerable amount of the course content, or be taken en passant. Indeed, some units will surely be skipped and are intended only for those teachers who have a particular interest in a topic or a particular kind of exercise. There will be more units than can possibly be fitted into a year's course and teachers will be encouraged to put them together in a form that is commodious to their own intent.

In a manner of speaking, a collection of such units constitutes a course of study. But the image is unfortunate, connoting as it does, so many beads strung together by some principle of succession. It is our hope that after a certain number of units have been got through, a unit can then be introduced to "recode" what has gone before, to exploit connection. Some units only revisit and present no new material.

A unit also sits on the teacher's ready shelf, and consists of six constituent elements.

1. Talks to teachers. These consist of lively accounts of the nature of the unit--particularly the nature of its mystery, what about it impels curiosity and wonder. Our experience in preparing these indicates the importance of staying close to the great men in the field, if possible to find a great article that can be presented in somewhat abridged form. The design of a language (taken from Hockett) or the nature of kinship (taken from Radcliffe-Brown) or how a thing should be called (Roger Brown)--these are examples. The genre needs further invention and we are exploring the kind of writing required--something that is at once science and poetry. If it should turn out that a student finds "Talks to teachers" worth reading, so much the better.

2. Queries and contrasts. In trying out materials to be taught, we have learned certain ways of getting ideas across or getting the students to think out matters on their own. Often these can be embodied in devices--pictures, readings, and the like. But sometimes they are best stated as hints to teachers about questions to use and contrasts to invoke.

"How could you improve the human hand?" turns out to be a useful question. So does the question, "What are the different ways something can 'stand for' something else, like a red light 'standing for' stop?"

We have already spoken of our tactical fondness for contrasts, and we are coming up with useful ones in our designing. One such is to have students contrast a cry of pain with the words, "It hurts." Another is to compare the usual words from which phonemes may be inferred--hit, hat, hate, hut, hot, etc. Or the difference to be found in the two allophones of the phoneme /p/ in the words spit and pit--the latter of which will blow out a match held to the lips, the former not. Yet, the two are regarded as the "same letter" or the "same sound" whereas hot and hut are "different."

The range of antics with which a teacher can be helpfully equipped is great indeed--and she may use them or not as she wishes.

3. Devices. This part of the unit contains the "stuff"--the material for students. Principal among the devices is, of course, reading material and we are, like others, struggling to get such material prepared. In good season we hope to understand this obscure matter better. Currently, we are operating much as others have to find, or cause to be written, material that is interesting, informative, and in a decent style.

But there are many devices beyond reading that are in need of developing for different units. One is the film loop for use with Technicolor cartridge projectors that we use increasingly. We are putting four-minute loops together constructed from Eskimo and baboon footage, with the intention of asking questions or posing riddles. Too often, films have a way of producing passivity. Can we devise ones to do the opposite? Why does Last Year at Marienbad abrade the curiosity so well?

We are also exploring what can be done with games, as already noted, and with animation and graphics and maps. We shall get help where we can find it within E.S.I. and outside.

4. Model exercises. From time to time in devising a unit it becomes plain that the problem we face is less in the subject matter and more in the intellectual habits of children in ordinary schools. We have commented on some of these problems already--the difficulty many children and not a few adults have in distinguishing necessary from necessary and sufficient conditions, the tendency of children to be lazy in using information, not exploiting its inferential power to nearly the degree merited, etc.

Model exercises are designed to overcome such intellectual difficulties. We think they are best kept imbedded in the very materials one is teaching. But it is often helpful to provide the teacher with additional special devices. We intend to use puzzles, conondrums, games--a kind of pedagogical first-aid kit.

5. Documentaries. These are accounts, or even tape recordings, of ordinary children at work with the materials in the unit. We would like to have the documentary be both exemplary and at the same time typical enough to be within reach of a teacher in her own work.

Along with the documentary goes a more analytic description. The analytic documentary is designed to serve a dual purpose. The first is to make it plainer both to ourselves and to teachers what in fact are the psychological problems involved in particular kinds of intellectual mastery that we hope to stimulate in children. In this sense, the analytic documentary is a further clarification of our pedagogical objectives. But in another sense, they represent an attempt on our part to accustom teachers to thinking in more general terms about the intellectual life of children. The second objective--call it educational--is to provide teachers with what might be a more useful educational psychology than the kind that conventionally is to be found in textbooks dedicated to that obscure subject.

It is our hope that as we proceed in our work there will be "spin-offs" in the form of general research problems that can be worked on by research centers not directly geared to the daily routines of curriculum building and curriculum testing. The work of such centers, as well as research in the regular literature on intellectual development, will constitute a continuing font from which we can draw material for the analytic documentaries.

6. Supplementary materials. The final section of the unit "kit" consists of such supplementary materials as paperbacks (and lists of related paperbacks), additional film and game materials, and such other devices as might attract the attention of either a diligent student or an aspiring teacher. Without question, it will become clearer what is needed by way of supplement once we have gone further into providing what will be our standard fare.

A final word about the unit materials. We hope to issue them in such a form that this year's experience can be added to last year's kit. That is to say, we believe that as new experience is gained in teaching the course, new editions of the kits should be made available to all our teachers. We intend to gather the wisdom of teachers who try out the course so that it may be made available later to others, to gather in new materials for teaching, new documentaries, new analyses of the scholarly literature, and fresh attempts through our talks to teachers to lend a still more compelling mystery to those topics that deserve to be taught. Indeed, it is probably obvious by now that the six-sectioned unit kit, stretched from one end of the teacher's shelf to the other, is our proposed substitute for that normally most unhelpful genre, the teacher's manual.

Teacher Training

No plans for teacher training have yet been established, save that we hope within the next two years to bring together for a summer session a group of master teachers to help advise us about proper steps. Our staff now includes several highly gifted and experienced teachers, all now brooding over this very issue.

Tryout and Shaping

The "course," such as it is, will be "taught" to three classes this coming summer (1965) at the Underwood School in Newton. The classes will be entering Fourth, entering Fifth, and entering Sixth grade, with the object of discovering what level to pitch the material at, how to take account of the slow and fast ones, and so on. But teaching is in this case part of a summer workshop effort to get material written, drawn, readied. It will also provide an opportunity to do the kind of intensive interviewing of children to determine what they are making of the material and how their grip may be strengthened.

In short, the summer ahead is a first effort to do an intensive summer workshop on the course.

CHAPTER THREE:
THE JUNIOR HIGH SCHOOL

Curriculum Models for Junior High School Social Studies

Franklin Patterson

Introduction: The Hazards of Choice

Alternatives and constraints are immanent in every choice. The rub is that we are not ever aware enough of all the contingencies ahead of time, and for the most part do not realize them adequately even after a choice is made. Perhaps it is ignorance itself that enables us to act at all. If we knew all the variables and all the ultimate limitations, or used ourselves up trying to determine them, we might well be paralyzed by the appalling complexity of choice. Such paralysis happily has not afflicted the venture in junior high school social studies curriculum I will describe in this paper. Indeed, some of our best friends may feel that the venture has proceeded too much from innocence.

Let it at least be said that, as we set about designing new curriculum models for the junior high school years, we tried for a degree of awareness on our part which would inform action but not stifle it.

We are acutely aware, for example, that there is a virtually infinite range of substantive material about man and society from which the stuff of a curriculum can be selected. And no one can reasonably argue that any single selection or curriculum design drawn from this vast range of material is insuperably the best for the junior high school. We examined social studies curricula and teaching materials commonly used in the seventh, eighth, and ninth grades and became convinced that they certainly do not exhibit quality of an insuperably high order. We found ourselves unattracted at one extreme by elaborately detailed and finely articulated curricular designs which seemed to squeeze out all room for curiosity and freedom in learning. The opposite extreme, which declares that any curriculum at all is undesirable struck us as silly.(1) And we decided early that a curriculum which is principally occupied with "getting something across," with imparting information, is a trivial approach. As our colleague Jerome Bruner says, "unless the learner masters in a workable measure some manner of using what he has learned in exercising his taste or viewing his world or converting his difficulties into manageable problems, the 'something' that got across was surely not worth the effort of transmission." In a word, we became committed to the idea of transfer in curriculum.

We are convinced that the utility of selected subject content should lie in its closeness to perennial features of the human condition and to the structure of knowledge about these features; in its productivity of interest, concern, and curiosity on the part of children; and in the demands and opportunities it provides for acquiring and organizing data, for making intuitive leaps, for hypothesis-formation and testing, and for drawing inferences and achieving defensible generalizations.

Given these criteria, we have chosen to design illustrative curriculum models under the over-arching three-year theme of Man As A Political Being. In these models, we trust that subject content and pedagogy are inseparably related, and that doors are opened both for an increase in general intellectual discipline and an enlarged sense of humanity. We do not pretend that these curriculum designs are all-purpose or prescriptive. They are models of possibility. We do not pretend that they are inclusive, giving "coverage" of "everything important" about man and society They are a few selected pieces of man's total experience, knowledge about himself, and unanswered questions. We do not offer them either as linear history or as midget versions of the several social sciences. They are historical in that they are from the past, but largely in Croce's sense that the past has no meaningful existence except as it exists for us, as it is given meaning by us.(2) And they are intended to draw upon and use the structures and strategies of the social sciences, not to present these didactically.

In our choice of what to do, we have tried to be aware of children as the point of it all. I have thought of the children I have watched in the classrooms of a hundred suburbs, caged in a treadmill system of superficial education where their survival against boredom was managed only by the resilience which is youth's most remarkable possession. I have thought of the same treadmill system in the schools of the city, of the enormous gulf between the schools and the children of the urban poor, and of the boys and girls I once knew and worked with under the shadow of Brooklyn Bridge. Children in all their individual diversity have been on our minds. More than that, in dozens of classrooms from New York to the Rockies and in try-out laboratory sessions in Cambridge, children have helped in the empirical development of our materials.

Our awareness also has extended to the practical realities with which junior high school teachers live and work. These teachers are hard-pressed by their own treadmill of hourly classes, facing as many as 180 or more children a day, five days a week. They are burdened by non-teaching monitorial and clerical duties. They lead hectic, harried work-lives that leave many of them eventually overcome by the pervasive resentiment Friedenberg writes of, with only a shining few possessed of enough energy and lasting purpose to escape the trap of fatigue and cynicism. To ask today's junior high school teachers to renew the social studies curriculum on their own, helped a little by over-worked supervisors and an occasional consultant, is to ask the impossible--the task is Sisyphean tried that way. The memory of teaching history and social studies to twelve-year old boys and girls in an American public school is still vivid in my own mind; I can recapture all too easily the travail as well as the little triumphs of the real thing. The conditions that could make for inventive, sensitive teaching were hard to come by. Our choice has been to help teachers by producing the kinds of materials they would like to prepare themselves had they world enough and time. We have tried to do this with the full-time help of some very fine teachers, working side by side with university scholars.

Such considerations lie behind the choices we have made in curriculum construction. In addition, because of the nature of the problem and the remarkable resources Bruner brings to our work, we have been constantly aware of the need to deal with what is known about intellect, learning, and teaching as we plan and test new curriculum models. Bruner's own work in this regard has been our chief psychological and pedagogical compass. Before going on to a discussion of the organizing ideas, substantive content, and curriculum models we are developing for the junior high school it may be useful to review some of the concepts of intellect and education upon which our work is based.

Intellect, Discovery, and Structure

Not Bruner alone, but others too have been moving towards a new view of the relationship between intellect and the process of education. In this connection, the development of a unified theory of human intellect which organizes the known, unique, or primary intellectual abilities into a single system has been outlined persuasively by Guilford.(3) By factor analysis, components of intelligence have been distinquished as unique abilities needed to do well in certain kinds of tasks or tests. In recent years it has become apparent that the factors themselves may be grouped into three classes: operations, contents, and product.

Operations. This class of factors includes the following, all related to mental processes:

1. Cognition (discovery, rediscovery, or recognition)
2. Memory (retention of what is cognized)
3. Convergent thinking (getting the right, best, or conventional answer)
4. Divergent thinking (searching, seeking variety, taking "different" directions)
5. Evaluation (deciding as to goodness, correctness, etc., of what we know, remember, or produce)

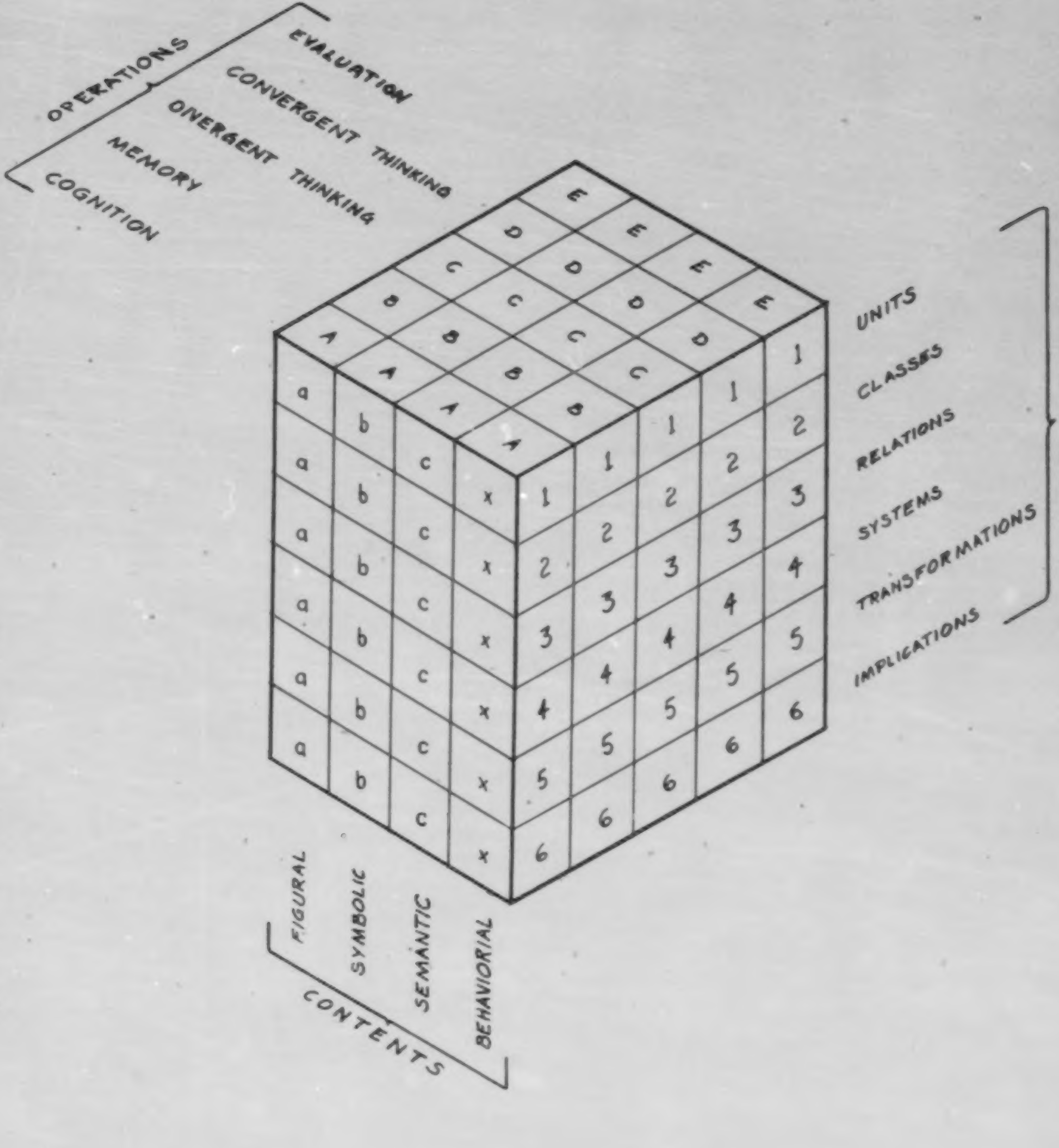
Contents. This class deals with the material or content with which intellect operates, and includes:

1. Figural Content (concrete material perceived through the senses)
2. Symbolic Content (letters, digits, signs, and systems of these)
3. Semantic Content (verbal meanings or ideas)
4. Behavioral Content ("social" intelligence; not yet factored)

Products. This class suggests the kinds of products which may be involved when a particular intellectual operation is applied to a particular kind of content. There are six, as far as factor analysis can presently determine:

1. Units (letters, numbers, forms, objects, sounds, etc.)
2. Classes (classifications, groupings)
3. Relations (formation of associations between units, etc.)
4. Systems (ordering, arranging, organizing)
5. Transformations (redefinition, changes of various kinds; e.g., changing functions or uses of parts)
6. Implications (inferences, conclusions)

Guilford suggests that these three kinds of classification of the factors of intellect can be represented by a single solid model, with each dimension representing one of the modes of variation of the factors. Each cell in the model calls for a particular kind of ability that can be described in terms of operation, content, and product, because each cell is at the intersection of a unique combination of these three classes. The Guilford model is shown on the following page.


OPERATIONS
EVALUATION
CONVERGENT THINKING
DIVERGENT THINKING
MEMORY
COGNITION
UNITS
CLASSES
RELATIONS
SYSTEMS
TRANSFORMATIONS
IMPLICATIONS
PRODUCTS
FIGURAL
SYMBOLIC
SEMANTIC
BEHAVIORIAL
CONTENTS
A
B
C
D
E
a
b
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x
1
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4
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6

An illustration of how this model may be used to conceptualize the intersection of component factors of intellect is an example which would fall in cell c5C, the divergent production of semantic transformations. Here we are dealing with "originality" in the sense of adaptive flexibility with semantic material, where there should be a shifting of meanings. Our interest is in a person's ability to produce original, clever, or outlandish new formulations from given semantic content.

In the Plot Titles Test, a person is presented with a short story and asked to come up with as many appropriate titles for the story as he can. One such story concerns a missionary in Africa, captured by cannibals, and about to be boiled in a pot. A princess of the tribe secures a promise that he will be freed if he consents to marry her. The missionary ungallantly--or unwisely--refuses, and is accordingly boiled.

Guilford divides titles produced by this unhappy little story into two categories: clever and unclever. Some typical unclever responses are: African Death, Defeat of a Princess, Eaten by Savages, The Princess, The African Missionary, In Darkest Africa, and Boiled by Savages. Titles deemed clever, reflecting originality and divergent production of semantic transformations, are these: Pot's Plot, Potluck Dinner, Stewed Parson, Goil or Boil, A Mate Worse Than Death, He Left a Dish for a Pot, Chaste in Haste, and A Hot Price for Freedom. Highest scores go to those who produce the greatest number of clever or original titles. Whether one might consider the degree of cleverness very high, at least the clever responses have something different--fresher and funnier--than the commonplace responses of the unclever type. They reflect the structural intersection of divergent thinking, semantic material, and the production of transformation.

Several relevant points arise out of Guilford's view of the structure of intellect. These bear rather directly on the process of education and the development of curriculum models.

One point has to do with the multi-dimensional character of intelligence. Over 50 intellectual factors are known already, and Guilford's theoretical model predicts as many as 120 distinct abilities, if each cell of the model contains a factor. Guilford feels that more than 120 ways of being intelligent will ultimately show up in testing and analysis. To know an individual's intellectual resources will require a surprisingly large number of scores. Since high variation and complexity within individual resources of intellect are increasingly evident, limited-option curriculum materials and single text books become as indefensible as uni-dimensional "intelligence scores" are in sorting children into sheep and goats.

A second point of fundamental importance to educational planning underlines much of what Bruner has told us. Guilford puts it this way:

> ...we might well undergo transformations with respect to our conception of the learner and of the process of learning. Under the prevailing conception, the learner is a kind of stimulus-response device, much on the order of a vending machine. You put in a coin, and something comes out. The machine learns what reaction to put out when a certain coin is put in. If, instead, we think of the learner as an agent for dealing with information, where information is defined very broadly, we have something more analogous to an electronic computer. We feed a computer information; it stores that information; it uses that information for generating new information, either by way of divergent or convergent thinking; and it evaluates its own results. Advantages that a human learner has over a computer include the step of seeking and discovering new information from sources outside itself and the step of programming itself... At any rate, this conception of the learner

> leads us to the idea that learning is discovery of information, not merely the formation of associations, particularly associations in the form of stimulus-response connections. I am aware of the fact that my proposal is rank heresy. But if we are to make significant progress in our understanding of the so-called higher mental processes of thinking, problem-solving, and creative thinking, some drastic modifications are due in our theory.
>
> The idea that education is a matter of training the mind or of training the intellect has been rather unpopular..../The/ emphasis has been upon the learning of rather specific habits or skills. If we take our cue from factor theory, however, we recognize that most learning probably has both specific and general aspects or components....The best position for educators to take is that possibly every intellectual factor can be developed in individuals at least to some extent by learning.(4)

Bruner deals beautifully with the relationship between intellect and learning-as-discovery in his set of essays On Knowing. He comments that in the various new curriculum projects undertaken in America during recent years, "one encounters repeatedly an expression of faith in the powerful effects that come from permitting the student to put things together for himself, to be his own discoverer."(5) Bruner hypothesizes that learning through discovery may indeed confer important benefits which justify the faith of the new curriculum builders. These presumptive benefits are summarized thus:

1. An increase in intellectual potency.

> Emphasis on discovery in learning has precisely the effect on the learner of leading him to be a constructionist, to organize what he is encountering in a manner not only designed to discover regularity and relatedness, but also to avoid the kind of information drift that fails to keep account of the uses to which information might have to be put. Emphasis on discovery, indeed, helps the child to learn the varieties of problem solving, of transforming information for better use, helps him to learn how to go about the very task of learning.(6)

2. A shift from extrinsic to intrinsic rewards.

> The hypothesis I (writes Bruner) would propose here is that to the degree that one is able to approach learning as a task of

> discovering something rather than "learning about" it, to that degree there will be a tendency for the child to work with the autonomy of self-reward or, more properly, be rewarded by discovery itself....The child comes to manipulate his environment more actively and achieves his gratification from coping with problems. As he finds symbolic modes of representing and transforming the environment, there is an accompanying decline in the importance of stimulus-response-reward sequences.(7)

3. Learning the heuristics of discovering.

> It is my hunch that it is only through the exercise of problem solving and the effort of discovery that one learns the working heuristics of discovery; the more one has practice, the more likely one is to generalize what one has learned into a style of problem solving or inquiry that serves for any kind of task encountered....I think the matter is self-evident, but what is unclear is the kinds of training and teaching that produce the best effects....Practice in inquiry, in trying to figure out things for oneself is indeed what is needed--but in what form? Of only one thing am I convinced: I have never seen anybody improve in the art and technique of inquiry by any means other than engaging in inquiry.(8)

4. Aid to conserving memory.

> /The/...principal problem of human memory is not storage but retrieval....The key to retrieval is organization or, in even simpler terms, knowing where to find information that has been put into memory....One can cite a myriad of findings to indicate that any organization of information that reduces the aggregate complexity of material by imbedding it into a cognitive process a person has constructed for himself will make that material more accessible for retrieval....Thus, the very attitudes and activities that characterize figuring out or discovering things for oneself also seem to have the effect of conserving memory.(9)

Bruner distinguishes two kinds of teaching: "that which takes place in the expository mode and that in the hypothetical mode."(10) In the former, the teacher is largely an expositor or teller while the student is a listener or passive recipient. In the hypothetical mode, the relationship of teacher with student is much more reciprocal and cooperative. The student is not a passive listener, but engages with the teacher in the process of acquiring information, formulating hypotheses about it, and evaluating information and statements. This contrast of modes involves the risk of oversimplification, but, granted a general difference between them, it is "the hypothetical mode which characterizes the teaching that encourages discovery."(11)

All that I have reviewed in this section leads to a nearly overwhelming question. If we assume that intellect is multi-dimensional and capable of enormously variable operation-content-product combinations, that every intellectual factor can be developed by learning, that learning in the most beneficial sense is discovery, and that learning by discovery is most encouraged by the hypothetical mode of teaching, where then are we led in curricular construction? What is a defensible way of proceeding in making new social studies curriculum models for--to be specific--children who are twelve to fourteen years old?

I think no one has more than hunch or bias to go by at this stage of the game. Some, like Holt, apprehend the problem with a naiveté which would be charming if it were less angry and shallow. His construction is that we have just two alternatives.

The first alternative as Holt sees it is to go at curriculum the way schools presumably do now, with these ideas:

> 1.) Of the vast body of human knowledge, there are certain bits and pieces that can be called essential, that everyone should know; 2.) the extent to which a person can be considered educated, qualified to live intelligently in today's world and be a useful member of society, depends on the amount of this essential knowledge that he carries about with him; 3.) it is the duty of the schools, therefore, to get as much of this essential knowledge as possible into the minds of children. Thus we find ourselves trying to poke certain facts, recipes, and ideas down the gullets of every child in school...(12)

Repelled by this alternative, Holt sees only one other way to move. This is in the direction of the anti- or non-curriculum, where the affairs of learning, the choices of what to learn, when and how, would be wholly unstructured by adults and left to children altogether to determine. From premises about intellect, learning, and discovery not unlike those I have reviewed, Holt concludes that adult-conceived "curriculum" (which he imagines could have only the form and meaning established in his first alternative) should be thrown out altogether:

> (We must) sweep this nonsense out of the way (he writes)... We cannot have real learning in school if we think it is our duty and our right to tell children what they must learn. We cannot know, at any moment, what particular bit of knowledge or understanding a child needs most, will most strengthen and best fit his model of reality. Only he can do this. He may not do it very well, but he can do it a hundred times better than we can. The most we can do is try to help, by letting him know roughly what is available and where he can look for it. Choosing what he wants to learn and what he does not is something he must do for himself.(13)

The method of discovery certainly rules out the first alternative Holt sketches. And the concept of structure in the process of education rejects the idea of an anti-curriculum, in which the child is all. Modern curriculum building cannot intelligently take either the "stuff their gullets" route or the route of romantic anarchy.

We are concerned, as Guilford suggests we should be, with learning and transfer of a general order--as well as with the learning and transfer of specific habits and skills. General or nonspecific transfer means the transfer of principles and attitudes:

> In essence, it consists of learning initially not a skill but a general idea, which can then be used as a basis for recognizing subsequent problems as special cases of the idea originally mastered. This type of transfer is at the heart of the educational process--the continual broadening and deepening of knowledge in terms of basic and general ideas.(14)

Our position with regard to curriculum development in junior high school social studies is that as adults:

1. We have a responsibility to gear our curriculum and pedagogy to fundamental ideas and principles of the social studies. This implies that we must--with all the wise counsel we can get--decide what fundamental ideas constitute the structure of what we propose to teach.
2. We must develop teaching materials in which these basic ideas and principles are given a central role.
3. We must design these materials not only to enable students to grasp and wrestle with fundamental ideas, but to give them exciting experience in inquiry and discovery which will develop their capacities and appetite for further learning.

In following sections, I suggest the directions in which we have moved from this position as a base. We have established a major framework or structure of fundamental ideas for a three-year sequence in social studies for twelve to fourteen-year old children. Within this over-arching framework, we have thought of certain basic ideas as being central for each of the three course-years. For the first and third years, we have developed prototype units of instruction built around materials designed to maximize student opportunity for manipulation, analysis, and generalization about data. In the middle year of the three--roughly the eighth grade--we have gone the farthest in establishing a structure of ideas and a series of units of open-ended material through which the act of discovery may be exercised.

We are attempting, then, not to set up a curriculum of "essential information" with which the gullets of children must be stuffed. Nor are we abdicating the adult role and leaving it to children to construct their own education alone. Instead, we are trying to relate the structure of the study of man and society to the experience of discovery on the part of children, and in doing so engage and enlarge as many factors of intellect as we can.

Generalization, Valuing, and the Idea of Causality

In the broad context of social studies as an integration of history and social science, three principal ends which curriculum should serve have to do with generalization, valuing, and the idea of causality. Each of these is a problem of the highest order for all knowing at all levels. Each seems to us to be one of the central concerns and functions of an effective curriculum dealing with man and society.

We are all chronic generalizers. The historian, Carr says, "is not really interested in the unique, but what is general in the unique."(15) So, too, is the reader as well as the writer of history; the former can hardly avoid applying the historian's observations to other contexts with which he is familiar, including his own. But this matter is not a special circumstance of historians and their readers. Generalization is one of our most fundamental ways of coping with the immense variety of our total experience. What Potter calls "latent generalizations" are likely to pervade and underlie, most often unconsciously, our explicit statements about data, experience, and ideas.(16) It is a commonplace that our perception of physical and social phenomena is usually stereotyped. Much of what we see in the new is the memory of an earlier perception, functioning for us as a generalization. Generalization as an act is inescapable. I only wish to suggest that a principal task of curriculum is to help children become systematically aware of their own latent generalizations and those of others. The task also is to provide children with experience in making generalizations which they recognize and which, as far as possible, they make rational and explicit.

The task is to help them generalize intelligently and avoid operating on "unrecognized, half-hidden assumptions which remain unordered and chaotic."(17) Practice in the production of defensible generalizations is an integral aim of our curriculum models.

A special case of the act of generalization is that of valuing. The need to judge is in our bones. To try to separate the act of valuing from the act of knowing in the study of man and society is a sadly empty quest. Nothing in this connection is more poignant than the effort of Marc Bloch to make such a separation in his unfinished book, The Historians' Craft, written in the dark days of 1942 or 1943, when as a French Jew he was being driven from academic life by the Nazis. Bloch eventually became a Resistance leader near Lyons, was captured, imprisoned, tortured, and on June 16, 1944, taken into an open field and shot with twenty-six other patriots. Thinking as an historian of the relationship between knowing and valuing, this man who was so soon to die a senseless, brutal death wrote:

> When the scholar has observed and explained, his task is finished. It yet remains for the judge to pass sentence...(18)

The dichotomy between fact and value assumed by Bloch bears little real examination. What Carr points out for historians could be said equally well for social scientists who frequently proceed as though the value problem did not exist for them:

> When we seek to know the facts, the questions which we ask, and therefore the answers which we obtain, are prompted by our system of values. Our picture of the facts of our environment is moulded by our values, i.e., by the categories through which we approach the facts; and this picture is one of the important facts which we have to take into account. Values enter into our facts and are an essential part of them. Our values are an essential part of our equipment as human beings.(19)

Truth straddles the world of fact and the world of value; the search for truth ineludibly involves us in questions of value as well as fact. Using Potter's nomenclature, we can say that a major problem of social knowledge in this connection is unawareness of the latent values that affect one's search. We try to build our curriculum models so that children can consciously encounter the fact of valuing as well as the value of fact, and wrestle with the dilemmas and ambiguities these interlocked realities expose one to.

Finally, we have a basic concern for introducing children to an awareness and grasp of the idea of causality--and some measure of its complexity. With Carr, we take it that "the study of history is a study of causes," and that "the historian deals in a multiplicity of causes."(20) While the student of society must work through the multiplication of causes, he is equally engaged in working through their simplification in order to get at regularities and generalizations. Unhappily, except for the recent contributions of such men as Carr, Potter, and J. H. Hexter, (21) one cannot find as much acknowledgment of all this among historians as Bloch expressed in saying, "In a word, in history, as elsewhere, the causes cannot be assumed. They must be looked for...."(22) Potter's criticism of historians in the United States is severe:

> The literature of their method and the procedures of their training give so little attention to the systematic analysis of such relationships (between separate items of data involving effects) that a majority of those trained in history have never confronted the general question of the nature of causation....(23)

Insisting that theirs is a pragmatic approach--free from a priori generalizations and antiseptically non-theoretical--such historians feel they are "confining themselves to facts," and not engaging in interpretation: "A prudent man might avoid needless exposure to criticism if he would refrain from speaking of causes as such."(24) If criticism of this kind applies at all to historians, it fits many social scientists infinitely better. Among them, for the most part, the question of causality is dealt with in such a gingerly and distant fashion that one can hardly find it in the thickets of multivariate analysis and the "analysis of change through time."(25)

Without entering into the quarrels of historians about the appropriateness of trying to deal with causes, and without probing into the coyness of social researchers on the subject, we place our money on the need for a social studies curriculum to open up the idea of causality, its uses and hazards. Everyday life would be impossible--or at best a nightmare out of Kafka--if we could not assume that events have causes and that in principle the causes may be ascertained. Similarly, the social past would be only a history of the absurd if we ruled out causality considerations as a way of finding patterns and coherences enough to make the world comprehensible. We therefore have designed materials as best we can to lead children to the question of Why? and Whither?

Generalization, valuing, and causality thus are major points of emphasis in what we are proposing for children to study. In a broad sense, these points ultimately occupy the attention of all meaningful study of man and society. Herbert J. Muller's assumptions about his own work provide an example:

1. That the ideal of history is, in the words of Morris Cohen, "an imaginative reconstruction of the past which is scientific in its determinations and artistic in its formulation";

2. That history is more genuinely scientific in spirit as it takes into account the reasons why it cannot be utterly objective or strictly scientific in method;

3. That among these reasons is the necessity of dealing with a complex of factors--physical, biological, psychological, cultural--that cannot be measured, isolated in controlled experiments, or reduced to a single cause;

4. That among these factors is the force of human will--of mind and character, ideas, and ideals;

5. That this force makes it necessary to pass ethical judgments on history, and that such judgments are in fact implicit in the works of the most resolutely amoral historians;

6. That our scientific, esthetic, and moral interests alike call for a world view, a kind of anthropological study of civilizations, as a perspective on our own civilization;

7. That in this perspective we can make out universals or underlying uniformities but cannot claim possession of the absolute truth about man and the universe, cannot hope for complete certainty about beginnings and ends; and

8. That this is not simply a depressing conclusion.(26)

In the junior high school curriculum sequence, our design and content are narrower by a great deal than the sweep of civilizations with which Muller has dealt. At the same time, our materials and pedagogy are in a sense broader, being concerned with the social sciences as well as with the study of history. The spirit of Muller's assumptions applies to our effort nonetheless.

Children and the World as Political

The basic orientation we have chosen for a three year junior high school social studies program is towards political aspects of man's life. This choice was made for several reasons.

One reason is that we felt it essential, out of all the substantive options available, to center on a dimension of social experience which has a commanding significance and which in various ways touches the lives of every person. Further, studies of children indicate that, as the political scientist Charles E. Merriam observed in 1931, "The process of politicalization begins far down the scale both in organization and in years. The point of departure for civic education is the child."(27) Currently, David Easton and Robert D. Hess of the University of Chicago are studying the political attitudes of some twelve thousand children in eight cities in grades two through eight. The conclusions of their study are not yet published, but their work so far confirms Merriam's statement and adds much that is exciting to consider. For example, it appears that the influence of the family is more limited than had earlier been thought, and that the school emerges as the most influential agent of political socialization in the child's life.(28)

If this is true--and in view of the American school's historic commitment to education for citizenship it seems likely--then what happens in the school's treatment of politics and governance is crucial. Several possibilities and outcomes are evident.

For one thing, classroom instruction may result in a kind of "copybook civics" and mythic history which leads a child to have unrealistic perceptions of the citizen's role and the nature of governance. If we instill in children a utopian view of the citizen and his government, we may unwittingly contribute to his later disillusionment and political alienation. There will be less than human perfection in the political world he grows up into. Politics will be a vigorous, earthy, and conflictful part of all government, public and private, and he had best know and accept it in realistic terms. If what he learns in school is only a prettified version of what politics and governance ought to be, he will be ill equipped to deal with what politics and governance really are in human life. To achieve political maturity, he must move toward a level of rational insight and ultimate activism in which he can perceive the realities of the political structure, can hold political goals which are operationally possible, and share in developing institutions through which these goals may be realized.(29)

Through the school, children can learn to understand an idea of citizenship which requires genuine political maturity. Citizenship within the western tradition has been defined with deceptive simplicity by D. W. Brogan, the British political scientist:

> What is this idea? It seems to me to have two aspects. The first--possibly the most important, certainly the most novel--aspect is the assumption that every citizen has the right to be consulted on the conduct of the political society and the duty of having something to contribute to the general consultation. The second aspect is the converse of the first. The citizen who has a right to be consulted is bound by the results of the consultation. His duties flow from his rights.(30)

In understanding Brogan's definition, it is necessary to note that he uses the term "political society" instead of "government." In doing so, he recognizes that government, complex as it is, is only one of many organized and informal structures of power, influence, and relationship in which the citizen finds himself. The individual enters into a political society at many levels and in different roles.

It appears to us not only possible but desirable for the school to lead children into a study of the dynamic role of politics in human existence at many levels. Certainly it is feasible to introduce children to the idea that motivation and emotions play a significant part in man's political life. Certainly, too, it is possible to introduce them to the fact that the political scene in which people act is given meaning by perceptual and cognitive processes and related areas of intelligence and mental organization. Probably no more relevant justification for the orientation of our junior high school curriculum models in the direction of political life can be offered than the argument that a) effectively functioning citizens in a democratic society need as sound cognitive maps of political life as they can get and develop; b) not only attitudes, but a person's whole style of political thinking is influenced in manifold ways by intellectual processes;(31) and c) cognitive maps, attitudes, and fundamental intellectual conceptualizations about politics are substantially affected by the school by the end of early adolescence.

The Limitations and Uses of Political Science

Choosing any single field of the social studies as pivotal for a major block of the curriculum has its limitations as well as its uses. Let us take a look for a moment at both with regard to political science.

There are those who would claim that political science is neither political nor scientific, and many would be at least half right. The field of study, its scope, methodology, and style are matters of controversy among the scholars involved. The internal divisions of political science are analogous in a sense to the conflicts and uncertainties of an adolescent. As a field, political science is not altogether sure what it is or what it wants to be. Its theoretical structure is diverse, at best potentially rich, but lacking in coherence and clear, accepted definition.

Specialists in traditional descriptive studies of institutions and governmental forms are mixed in with historical students of political thought and philosophy; these rub elbows with innovators of public administration procedures, historians of political events, biographers of political persons, students of international relations and diplomacy, and others. Since Graham Wallas, there has been a mounting invasion of the study of politics and governance by all manner of academic outlanders, oriented toward behavioral, quantitative, psychoanalytical, or other exotic approaches; speaking a language and using instruments, statistical procedures, and hypotheses which seem as outrageous as they are imcomprehensible to the more traditional denizens of the field. What was a simple, happy domain half a century ago now is poached in by political sociologists, social psychologists, semanticists, survey researchers, students of personality and character, and others. V. O. Key found Erik Erikson's ideas and those of "other Freudians" offensive, and Freudians would perhaps have regarded his conception of political motivation as naive. The remarkable diversity of the field, its internal conflicts, its lack of a coherent theoretical structure, its ambiguities, and its current growth in many directions, combine to make it complicated to draw upon for a generally agreeable reconstruction of social studies in the schools.

At the same time, the amorphous character of the field of political science ironically may make it useful in developing a social studies curriculum. By definition, we want our social studies curriculum to shed light on man and society from a variety of points of view; e.g., from those of history, economics, sociology, geography, psychology, and anthropology. The fact that modern political science has some of all these fields, and more, in it may turn out to be a virtue for social studies curriculum purposes. In an almost embarrassing sense, nothing human is alien to political science. Thus, within its rubric, we can feel free to draw upon a number of disciplines for materials and ideas useful to a curriculum.

But political science yields certain powerful ideas and questions of its own which are also useful to us in establishing the major framework of a junior high school social studies curriculum. The next section suggests what we see these to be.

Power and Political Culture

The overarching theme of the three year junior high school social studies sequence within which we are developing curriculum models is Man As A Political Being. The theme is certainly no newer than the Politics of Aristotle. As our colleague, Elting Morison, has written elsewhere, "...one of the most perplexing ambiguities in human experience (is) that posed by the fact that man is both a private, separate, independent being and, as Aristotle said, 'a political animal'--a member of a community. He is himself, and citizen, and these can be quite different things at different times."(32) By definition, course material that proposes to offer the study of man as a political animal becomes caught up in the ambiguities and difficulties Morison suggests.

Norton Long has written about the social studies generally that we have:

> A mixed enterprise on the one hand concerned with the value of neutral objective pursuit of scientific knowledge (in this case, dealing with political behavior, institutions, and the like) and on the other concerned with the humanistic and philosophical task of entering the student into an informed and critically intelligent appreciation of his cultural inheritance and even of the broader milieu in which the educated and responsible citizen of today must function.(33)

In such a mixed enterprise we are concerned not only with information, but with providing a theoretical apparatus for giving order and significance to information, a methodology of inquiry, and ways of assessing and appreciating the values that are involved.

Two fundamental concepts of political science provide the principal sources from which the questions and organizing considerations of this three year curriculum sequence proceed. The first of these is the concept of power, particularly political power, in human society. The second concept is that of political culture. Let me treat each of these in turn briefly and suggest the utility we feel that they have in giving structure to the social studies curriculum.

Because one cannot approach the polity for study or action without encountering relationships of governor and governed, political scientists have tended to single out power as the feature of human relationships of deepest interest to them. Not long ago, Hans Morgenthau suggested making power the central concept of the theory of politics and using this central theoretical conception as the core of a new curriculum of political science itself:

> On the one hand, the curriculum must take into account the fact that its concept (power) is a general social phenomenon which manifests itself most typically in the political sphere, but is not limited to it. The phenomenon of power and the social configurations to which it gives rise in the political sphere play an important, yet largely neglected, part in all social life. A configuration, such as the balance of power, for instance, is a general social phenomenon to be found on all levels of social interaction.(34)

Indeed, it is the pervasiveness of power as a factor in human relationships that makes it such an immensely productive concept to work with in the social studies. As Merriam said, "It is a creature of habits, of culture patterns woven deeply into the lives of men..."(35) Merriam argued against drawing too sharp and exclusive a line between political and other forms of power, suggesting that a clearer view is gained by recognizing the fundamental similarity between power in one context and in another. He proposed that the world would be far more difficult to govern if this were not so because the habits and ways learned in one group would not be transferable to another and reinforced by further experience and observation.

A broad view of the concept of power has led to its use and reinterpretation in a number of fields other than political science. The concept has been the center of a considerable historical literature, particularly in recent years. American historians who have studied power in the colonial and other periods include Jack P. Green, William A. Reavis, Bernard Bailyn, Sigmund Diamond, J. R. Pole, Richard McCormick, John Morton Blum, and others. An example of this literature is Anthony F. Upton's, "The Road to Power in Virginia in the Early Nineteenth Century."(36) In sociology, the work of Floyd Hunter, N. W. Polsby, C. Wright Mills, and others suggests how variously and extensively the concept of power has been explored.

The concept has had use, of course, in other fields including, interestingly enough, that of child study, where Marion E. Turner's unusual verbatim reports of the conversations of a group of children four to nine years of age deals in part with "power factors in children's play." Turner used conflict and conflict resolution in childhood relations as a means for introducing children to the study of power relationships and the elements of governance. Indeed, without conceptualizing a bit abstractly, children in the hierarchies of our family life and our schools are perceiving, assessing, and engaging in power relationships constantly. In this sense, there is probably no social subject matter more available to children--and less used by schools for purposes of study--than that covered by the concept of power.

The broad utility and productivity of the concept of power is intensified when it is defined in political terms and used as a theoretical construct for inquiring into and ordering political events and developments. Politics as power consists basically of the relationships of governors and the governed, and the study of politics is the study of these relationships. This is not to say that power is one-sided, operating only by command from above. As Key said, the "power relationship is reciprocal, and the subject may affect the ruler more profoundly than the ruler affects the subject."(38) Whatever the case, a working political system consists of a multiplicity of power relationships which, taken together, assume characteristic forms. Countless, and usually oversimplified, efforts have been made to categorize structures of power into institutions and types of government. This is harder to do than it once seemed, because we find that the real world of power, like social life generally, hardly ever comes in neat packages. Even though power relationships within all societies tend to be organized into systems of authority, the roles and relationships involved--no matter how prescriptive--are occupied always by very human beings. Therein lies the drama, comedy, tragedy, and fascination of politics.

Using power and political power as central organizing concepts for our three year junior high school sequence on Man As A Political Being, provides us with generative questions with which children can look at a wide range of human phenomena, all the way from relationships in their own schools to power relationships in the death of the Roman Republic. Some of these questions are:

-- What is power in human society?

-- Why is power a part of human society?

-- What does power rely upon?

-- What are the evils of power?

-- How do people protect themselves against excesses of power?

-- How does power operate to survive?

-- What are the conditions under which power sickens and dies?(39)

If questions like these underlie the materials in our units of instruction, and if the materials are worthy and imaginatively presented, it seems likely to us that children will come up against and need to think hard about the implications of power in man's life as a political being. They will be drawn into considering structures of power and styles of authority, as these affect them and have affected others. They will need to look at the idea of role as distinct from person, and at differential roles as bearers of authority. They will have to ask themselves how power is legitimized, how it depends on custom, how it operates through institutions. They will need to investigate and consider the sanctions in which authority is clothed, all the way from those of an economic nature to the extremes of violence and force. They will find themselves studying the function of attitudes and values in relation to power and asking how these things are formed and changed. They can look at the dilemmas of power that center around the dispersion or centralization of authority, perhaps considering the proposition that dispersion of power makes competition among centers of power inevitable. They will have to examine the troublesome problem of succession to authority, and will need to look at instances of the overthrow and reconstitution of authority. Their studies should lead them to test out the part that dissent and criticism may play within differing systems of power and how the processes of consultation and consent may work or fail in the transactions of political life.

Not least, in some measure, use of the central concept of power and the implications of it which I have tried to suggest here should--providing that our materials are adequate--bring students to a confrontation of the political order within which they live.

The second major concept which informs the intellectual structure of our three year junior high school sequence is that of political culture. First introduced by Gabriel Almond in a provocative article in 1956,(40) the concept of political culture has recently been applied in one of the largest cross-national surveys ever attempted in the field of political science.(41) The idea of power is synthetic and endowed with a remarkable productivity which makes it useful for political and social studies. So, too, is the idea of political culture.

The concept of power, as we have seen, is principally concerned with relationships, and for our purposes particularly those relationships found in aspects of political life. As Lasswell puts it, "Power is an interpersonal situation; those who hold power are empowered. They depend upon and continue only so long as there is a continuing stream of empowering responses."(42) In this sense, power provides a foundation for studying matters with which relationships are most closely involved; e.g., motivation, influence, forms and roles of authority and submission, reciprocality, the institutions in which relationships are patterned and given legitimacy, and the like. As a concept, power is a point of intersection for various disciplines besides political science, including at least history, sociology, and psychology. Like all really productive social concepts it is apt to trouble us both because it is at once simplistic and, when we seek to apply it, laden with complexity. The same might be said for the concept of political culture.

The notion of political culture is principally concerned with patterns of orientation to political action within which political systems of power are embedded.

Political culture in Almond's sense assumes a prior concept, that of political system. This is a system of action, a totality of relevant units, with interdependence among the units in their interactions, and a certain stability or changing equilibrium in their interaction. For Almond, the relevant unit of the political system is role. He prefers role to such terms as institutions, organizations, or groups because he feels it a more open and inclusive notion. Role can "include formal offices, informal offices, families, electorates, mobs,...and the like, insofar as they enter into and affect the political system."(43) Weber's definition of a political system as the legitimate monopoly of physical coercion over a given territory and population is restated by Almond to fit the concept of role:

> It is, of course, clear that political systems protect freedoms, and provide welfare, as well as impose order backed up by physical compulsion, but even their protection of freedom and their provision of welfare is characteristically backed up by the threat of physical compulsion. Hence, it seems appropriate to define the political system as the patterned interaction of roles affecting decisions backed up by the threat of physical compulsion.(44)

Political culture is not considered to be bound by the territoriality of a political system: "Patterns of orientation to politics (i.e., political cultures) may, and usually do, extend beyond the boundaries of political systems."(45)

The concept of political culture is not the same thing as the concept of general culture, although the first is related to the second. Anthropologists use the term culture in various ways. The use suggested for it in political science employs only one of its many meanings: that of "psychological orientation toward social objects."(46)

Parsons and Shils have suggested that any orientation to politics entails three elements: cognition (e.g., perceiving, knowing, and discriminating among events, issues, actions, objects, etc.); cathexis (e.g., investing objects, events, issues, etc. with emotional or affective significance); and evaluation (e.g., organizing and selecting perceptions, preferences, and values related to political actions).(47) The political culture of a society is taken to be the political system "as internalized in the cognitions, feelings, and evaluations of its population."(48) The political culture of a country is found in the characteristic distribution of patterns of orientation toward political objects among the people of the country.

In classifying objects of political orientation, we may examine the general political system. We can seek to determine cognitions, feelings, and evaluations of people with regard to the system. At the other extreme, we can seek to determine orientations toward the "self" as political actor, the sense of personal political obligation and competence which people have with regard to the political system. The political system may be analyzed into three components: roles or structures (e.g., executives, legislative bodies, bureaucrats or bureaucracies); incumbents of roles (e.g., particular monarchs, legislators, administrators, etc.); and decisions (e.g., particular policies, decisions, or enforcements). The objects within these three components of a political system may in turn be classified according to whether they are part of a "political" or input process, or part of an "administrative" or output process:

> By political or input process we refer to the flow of demands from the society into the polity and the conversion of these demands into authoritative policies. Some structures that are predominantly involved in the input process are political parties, interest groups, and the media of communication. By the administrative or output process we refer to that process by which authoritative policies are applied or forced. Structures predominantly involved in this process would include bureaucracies and courts... The political culture becomes the frequency of different kinds of cognitive, affective, and evaluative orientations toward the political system in general, its input and output aspects, and the self as political actor.(49)

Using the concept of political culture, Almond and Verba develop a typology which provides sub-concepts useful to us in a social studies curriculum concerned with the varieties of man's political experience. This typology of political cultures includes the following:

1. Parochial Political Culture

Parochial political culture exists when the frequency of orientations to specialized political objects (i.e., system as general object; input objects; output objects; and self as active participants) approaches zero. For example, the political culture of African tribal societies would be considered parochial. In them there are no specialized political roles. The headman, the chieftain, the shaman, occupy diffused political-economic-religious roles, and the members of such societies do not separate their political orientations to these roles from their religious and social orientations. There is a comparative absence of expectation of change initiated by the political system.

2. The Subject Political Culture.

In the subject culture there is a high frequency of orientations toward the political system and toward the output aspects of the system. But orientations toward objects which are specifically of an input or political nature, and toward the self as an active participant in the political system, approach zero:

> The subject is aware of specialized governmental authority; he is affectively oriented to it, perhaps taking pride in it, perhaps disliking it; and he evaluates it either as legitimate or as not. But the relationship is toward the system on the general level, and toward the output, administrative, or "downward flow" side of the political system; it is essentially a passive relationship...(50)

3. The Participant Political Culture

In the participant culture, the members of the society are likely to be explicitly oriented to the political system and to both its political and administrative processes. They may be favorably or unfavorably oriented to the various classes (system, inputs, outputs, self) of political objects. And they are likely to be oriented toward an "activist" role of the self, even though their feelings and evaluations with regard to such a role may vary.

Any effort to present this typology in digest form constitutes an oversimplification of a drastic sort and may leave any number of misconstructions in its trail. Certainly a few cautions should be noted here. One is that the typology is not meant to suggest that one kind of culture replaces the others. Instead, as the political culture changes it is likely to retain features of the earlier culture, of course not leaving "earlier" features unchanged. A related caution is that this three-fold typology does not imply pure homogeneity of political cultures. A predominantly participant culture will include both subject and parochial elements in it. And it is not to be thought that the typology excludes consideration of political development and cultural change:

> Political cultures may or may not be congruent with the structures of the political system. A congruent political structure would be one appropriate for the culture: in other words, where political cognition in the population would tend to be accurate and where affect and evaluation would tend to be favorable. In general, a parochial, subject, or participant culture would be most congruent with, respectively, a traditional political structure, a centralized authoritarian structure, and a democratic political structure. A parochial political culture that was congruent with its structure would have a high rate of cognitive orientations and high rates of positive, affective, and evaluative orientations to the diffused structures of the tribal or village community. A subject political culture congruent with its system would have a high rate of cognition and high positive rates of the other two types of orientation to the specialized political system as a whole, and to its administrative or output aspects; while the congruent participant culture would be characterized by high and positive rates of orientation to all four classes of political objects. Political systems change, and we are justified in assuming that culture and structure are often incongruent with each other.(51)

In spite of the turgidity of the language of social science and the density of a compressed summary, perhaps it is evident that the concept of political culture--like that of power--has a unique capacity for generating questions and hypotheses, and for serving as a general analytical tool. To the degree that our curriculum materials are successfully informed by this concept, they should raise, even if in less technical language, questions like these:

- Why are there different kinds of political cultures?
- How does the general culture affect the political culture and vice versa?
- How do political culture and technology affect each other?
- What part does language (including all forms of symbolic communication) play in political culture?

-- How do people learn a political culture?

-- What kind of political culture do we live in, how did we come to it, and what it will be in the future?

The elementary curriculum sequence discussed earlier by Bruner takes children into the study of technology, language, social organization, and child rearing as ways men have of becoming and being human. Among other circumstances of the human condition, man is indeed a political animal, and the political dimension of his humanness can be gotten at by concepts and questions that have a good deal in common with what Bruner proposes for the elementary curriculum. Certainly political culture and social organization could not be more directly related to each other. Nothing is closer to the heart of the political process in which power and political culture play a part than is symbolic communication. The inter-relationships between political culture and level of technology could hardly be closer. And the learning of a political culture is a significant, special instance of the powerful part that child rearing and education play in shaping the humanity of man.

Whatever the eventual outcome in actual curriculum materials, we have set up the general framework for a three year junior high school sequence in the social studies around two major theoretical concepts, and other subconcepts they entail, which are in current use by many scholars in history and the social sciences. The concepts of power and political culture, as we have seen, are in some measure special to the field of political science but in many ways available to and used by other fields. These concepts and subsidiary constructs lend intellectual structure to our version of a junior high school social studies curriculum and at the same time allow for consideration of value questions which are implicit in the concepts themselves. I have been moved to trust in this direction in part by Robert G. Hanvey, a social studies teacher and innovator of no little stature, who observed several years ago that:

> Backwardness of the social studies...lies in *failure to employ modern conceptual and theoretical tools of the social sciences*.... The social studies (and I have been talking mostly of the history curriculum that, de facto, *is* the social studies) lags in its intellectual technology not only behind social scientists but even behind educated laymen. Words like "culture" and "values" and "personality" are in the public domain. But they are not in the public schools. And although, as with DNA, RNA, and protein, *culture, personality, and role* may serve as "a significant sequence," the latter set is simply invisible to the high school history student. Being invisible, it is unavailable as an explanatory tool to be applied to the otherwise inexplicable. A genuine renaissance will occur in the social studies when modern conceptualizations come into use...an enriched perception is inherent in the use of new concepts and if they are wisely chosen, new vistas will open up. Explanation of individual and group behavior will no longer be superficial and final, but rich, open, and growing--something not to be retained but to be *attempted*. Students and teachers alike can be exhilarated by the mastery, not of facts, but of conceptual tools that bring new meaning to fact.(52)

General Nature of the Framework

We are dealing with some of the most useful and complex ideas currently available in the social sciences and history. We see these ideas as providing intellectual structure and conceptual tools for a three-year junior high school sequence in the social studies. To clarify what this means in fact, several things need to be said about the general framework of the sequence.

One is that the three-year sequence, called Man As A Political Being for convenience, is not a set of courses designed for graduate study. While I have used abstractions and technical terms in suggesting the conceptual structure we have in mind, the reader should not assume that our actual course materials are preoccupied with abstractions and technical terms. Our materials are concerned with data and processes through which children may work, assisted thereby toward concept development but not swamped by technical jargon. An analogy may be made between what we are about and what David Page and others are doing in mathematics, where children are taken into extraordinarily sophisticated exercises in mathematics without being frightened off by a load of abstruse terminology.

A second thing to make clear is that the framework of our three-year junior high school sequence is in fact deliberately flexible and open. The models of content and instruction we are developing are only a few among many alternatives. To us, it is not the specific content that is precious and special. Instead, the important things are the ideas, skills, and values that children learn; these can be learned through many kinds of content. The very general framework we set up could assimilate to it many other models of content and instruction. Indeed, we hope that this will occur.

A third thing to make clear is that any one of these courses, and units within them, should be capable of being taught separately. Our framework may look at first glance as though it were intended to be rigid and tightly articulated. It is not. We have felt an obligation to provide a generally coherent sequence, but we have felt an equal obligation to construct our courses and units so that others could use them in ways different from our own sense of order. Thus, the second course of our three year sequence, From Subject to Citizen, can very well be taught quite separately from the courses which precede and follow it. Similarly, specific units within From Subject to Citizen can be, and have been, taught independently of other units in the course.

Fourth, each course involves some straightforward introduction to conceptual tools as such. This is not in conflict with what I have said about our avoidance of abstractions and technical jargon. We think that some conceptual tools need to be introduced to and used by the children with whom we are working. We do not intend to present theoretical courses about power, role, status, culture, etc. But we believe that at appropriate points in each course and at appropriate levels of sophistication. children can be given a direct introduction to the meaning and utility of some of these concepts. We also believe that, in addition to a large amount of indirect learning of methodology of inquiry which is built into our materials, our courses must include some simple but straightforward training in methods of historiography, rules of evidence, analytical discussion, and the like.

Fifth, in our eyes and in humble fact, the whole three year sequence is provisional. Some good part of it is still in the planning and drafting stage. On the other hand, a number of parts have been fully constructed--sometimes in several versions--and responsibly tested in small and large groups. One whole course is moving toward completion, with large scale production and trial of parts of it fully scheduled.

By way of summary to this point, the general nature of the framework, then, is to have an overarching theme, Man As A Political Being, for three courses roughly parallel to grades seven, eight, and nine. The theme reflects the concepts I have outlined and provides a focusing principle--essentially on political ideas, actions, and values--for the selection and treatment of curriculum materials in all three courses. The focus provided by this principle, as we will see, is not narrow; with it we can scan a wide range, since man political is many things. The theme and its subordinate curriculum components are chosen because of what we know of the politicization process in individual development. From a free society's point of view, it is important for the child in early adolescence to be given as much opportunity as possible to develop his ability to think about public affairs and politics and to examine meaning and value in history and government. We chose this focus, too, because it appears--on the basis of observation and experiment--to excite the interest and engage the energies of children. It does this if the materials are honest, and the opportunities for handling them demonstrate what Bruner calls courtesy in our approach to children: that we view children as capable of handling honest materials and wrestling responsibly with real questions and ideas.

The focusing principle provides a useful basis for discriminating within the infinite range of historical and social science material from which curriculum builders must choose. It gives us a rationale for the courses of the sequence, a major criterion for the selection of matters for study in depth within courses, and an alternative to relying upon chronological or topical history as our principle vehicle.

In the courses I will describe, the reader will find considerable reference to the studies-in-depth, or "units of instruction" with which we are concerned. These units are our main building blocks. Each has several parts; each has several versions of difficulty; each could occupy six or so weeks of classroom time; and yet each, we hope, is flexible, that is, capable of being taught separately from the course context we suggest and capable of being abridged or changed around by individual teachers and students. Each offers many options.

With this said, let us move to a brief description of the first course in our sequence and an examination of prototype unit materials from it. Subsequent sections will discuss the other two courses and some of their features.

Inventing the Western World

In making an initial experimental design for a first course in the junior high school sequence--approximately at the seventh grade level--we have chosen as our field of action a single major theatre of man's experience over a very long span of historical time. The theatre is the West. The time span is from something like the beginning of the fifth century B.C.--when Pindar wrote of Athens having "built the bright foundation of liberty"--until 1600 A.D.

Our simplifications may make strong scholars weep, or smile, at our innocence. Let's look at our assumptions in any case. One is that, looking back from here, we can regard "the western world" in its complex totality as a singular "invention" of enormous consequence for all of humanity. This is not a kind of magnified ethnocentrism. It is simply a recognition that an exceedingly powerful--even if conflict ridden--civilization stemmed out of the Eastern Mediterranean and ancient Near East. Over time, it absorbed innumerable significant contributions from the East and from the tribal peoples of Europe, and became the most dynamic system in the world. By 1600, the West was a force in Asia, the Americas, and Africa; as Kenneth Boulding puts it, by then the West had taken command of world history.

We assume that the West, regardless of the ideological guise in which it may present itself, reveals two extraordinary general characteristics. These persist strongly even where, as in modern China, deep westernization exists while the "official" West is rejected. These characteristics are that the West is profoundly revolutionary and that it is centrifugal in its effect. It is as though the West were a Typhoid Mary who was not really immune from the fever herself. Everywhere the West has laid its hand consciously or unconsciously the contagion of change has been contracted, and the world there is never again the same. The West has assimilated and generated--at first slowly and then with incessant acceleration--the elements of a total system of revolutionary influence which changes the world through science and technology, ideology and religion, economic operations and many other means. The system penetrates, destroys, rebuilds, and changes. How and why it has done so are matters well worth study. For our purposes, it is important to recognize that the central political effect of the West in modern times has been to set the stage for demands by men for a downward, wider sharing of values (e.g., in Lasswell's terms: power, wealth, deference, well being, education, rectitude, affection, and skill) which civilization makes available.

As the reader will see, the course described in the next section (*From Subject to Citizen*) leads children to study a specific instance of the revolutionary and centrifugal tendencies of the West, involving successful demands for a sharing of values. *Inventing the Western World* introduces children to thinking about the West, and aims to prepare them for the specific study of power and political culture with which *From Subject to Citizen* is concerned. *Inventing the Western World*, as we presently conceive it, presents a variety of case studies related to power and political culture which take children into an initial examination of man as a political animal. In addition, the course opens up questions about the general cultural ecology within which western man is a political actor.

For example, one unit of instruction is projected to raise questions about political socialization by comparing cultural differences between child-rearing in Periclean Athens and child-rearing in classical Sparta. Another, the prototype unit of this course, deals with the sickening of power, the struggle for new power, and the transformation of a political culture. It does so by focusing on the death of the Roman Republic in the first century B.C. The interrelationships of technological change and other conditions of man's existence, including that of master and man, will be examined in another study which I like to call the Horse Collar Unit. While we may deal with other significant technological changes such as the development of the water mill and the windmill in later Roman to early medieval times, the introduction of paper making techniques from Islam to Europe in the early twelfth century, or the development of the sternpost rudder and the three-masted sailing rig in the late middle ages, the horse collar has special attractions.

Almost incredibly, the collar harness for horses was not used by Romans. Instead, they harnessed horses with a neck rope in approximately the form of a noose. Horses pulled their draft under more than a little handicap: the harder they pulled the nearer they came to choking. Horses, who are notoriously intelligent, declined to pull with their full strength.

Perhaps through interaction with the East, the horse collar appeared in Europe in the ninth century; by the twelfth century the padded collar had reached full development. This seemingly simple technological device made it possible for a horse to pull by drawing against his shoulders and chest, to exert much greater strength, and to avoid choking. A happy arrangement all around, the net result was greatly increased efficiency in the use of animal power. Some have argued that the introduction of the horse collar eventually led to the extinction of slavery, at least in its worst forms. The horse with a collar constituted an efficient source of animal power with which the use of slaves could not compete. In any case, use of the horse collar helped to improve agriculture in Europe during the ninth through the eleventh centuries. What a horse so harnessed could plow during a day helped give a new pattern to the yield that could be expected from agriculture. Improved agriculture resulting from this device and other changes produced an economic base from which new ventures in architecture and art, in trade and travel, in war and missionary work could occur. At the same time, rigid political and social arrangements of the feudal order tended to block further technological advance in agriculture in the medieval period. Not until that order broke up in the age of renaissance, reformation, and discovery, did further innovation in agricultural technology come. In all of this, including the interactions among the elements I have noted, there is much material for study relevant to our purpose.

At this stage of the design of Inventing the Western World, a number of possibilities for model units are in our minds. Perhaps it will be useful to mention at least two more of these. One has to do with the study of the function of symbols in political culture and in the manipulation of power. Instances of this function in the long period under consideration are virtually infinite in number. A rather extraordinary unit, for example, could be built from records of the First Crusade. For the two centuries of the crusades, the Cross itself served as a politico-military emblem as well as a religious symbol. It represented the revolutionary and centrifugal impulses of the West. From the standpoint of political studies, the whole of the First Crusade offers rich fare, with many side opportunities to investigate the development of the technology of war, the importance of trading potential, and things that the West learned from the East.

Rather beautifully from our point of need, the First Crusade falls into two parts. The first is what might be considered the crusade of the people, preached in 1096 with fiery zeal by wandering preachers like Peter the Hermit and Walter the Penniless. Thousands of the poor in Europe were persuaded by such preaching to undertake what proved for them to be the tragically hopeless venture of freeing the Holyland from Islam. Only two divisions of pauperes out of five reached Constantinople from as far away as France. By the end of October 1096, these survivors had crossed the Bosporus only to be annihilated by the Seljuk Turks. All that was left of the people's crusade by the spring of 1097 was a heap of whitening bones. The other part of the First Crusade might be called the crusade of the princes. Here the story is altogether different, focusing around three glittering French princes, Bohemund, Baldwin, and Raymund. With them the venture had much of the political as well as the military about it. The competing political motives of these three princes, the ways in which they maneuvered against each other, the instruments of power they used, all combine to make the crusade of the princes a rich object of study. An incident at the siege of Antioch, involving the power of a symbol, may suggest this.

The crusaders besieged Antioch from October 21, 1097 to June 3, 1098. As soon as the besieging crusaders took Antioch they found themselves in turn besieged by a relief army of Turks. For twenty-five days, the exhausted crusaders were under continually mounting pressure and attack. Under this strain, reports of religious visions and phenomena began to circulate among the besieged crusaders. Raymund was particularly religious, and it was in his force of Provencals that these "spiritualistic" occurrences appeared. These phenomena came to a climax with the supposed discovery of the holy lance, which had pierced the side of Jesus on the Cross. Word of this supposed discovery ran through the whole army like fire. Under the stimulus of this news, excitement came to a high pitch, morale rose, and the crusaders were able to meet and defeat the besiegers on an open field before Antioch. The discovery of the lance, and the immediate victory over the besiegers which it led to, put Raymund in a position of new importance, and he struggled with Bohemund for possession of Antioch. The lance which had served to unite Provencal and Norman crusaders suddenly became a symbol of their disunity and struggle for power. The whole vision of the lance was brought into question by the Normans, and Peter Bartholomew, to whom the vision had first appeared, was subjected to the ordeal of fire. Church officials before long discounted the authenticity of the vision of the lance, but for a short period it had functioned as a powerful unifying and dividing symbol, linked tightly to achieving social cohesion against a common enemy and then caught up in Raymund's competition for power and political advantage.

Another unit may deal with concepts of role and status and their codification in law. Here a case study of the Magna Carta and its making are under consideration. What Maitland called an intensely practical document and a grand compromise, the Great Charter can be studied to advantage from the standpoint of political process. The very form of the Charter is a political compromise of the first order: in part it is a free grant of liberties made by the king, and in part it is a treaty between him and his subjects, to be enforced against him if he breaks it. In depicting and raising questions about role and status, the Charter has much to offer:

> In its detailed clauses it must do something for all those sorts and conditions of men who have united to resist John's tyranny--for the bishop, the clerk, the baron, the knight, the burghers, the merchant--and there must be some give and take between these classes, where not all their interests are harmonious.(53)

A study of John and the kingship enables the vital distinction between the incumbent and the role to be explored, and analysis of the Charter in its several versions leads into a view of the polity as a system of roles with varying status. Both from the standpoint of constitutional substance and political systems, the Charter is useful for our purposes.

The design of Inventing the Western World and of most of the possible units which I have touched upon in this discussion is still most tentative. As we proceed with the junior high school project, it is certain that other directions and possibilities will be explored for this course.

Even so, going ahead on the essential lines suggested above, we have prepared, tried out, and revised a prototype unit for this course. We refer to this as our Caesar Unit, although it deals with much more than one man. A brief review of our experience and plans in connection with this unit may illuminate how we are going about the preparation of model materials for Inventing the Western World.

In its present form, which has been experimented with in a number of classrooms and with students of widely varying scholastic performance, the Caesar Unit is simply constructed. Its nominal subject is a dramatic political event of the classical world: the desperate gamble which Julius Caesar made at the beginning of 49 B.C. for supreme control of the Roman state. In January of that year, starting with only one legion, Caesar made a fateful decision to leave his jurisdiction in Cisalpine Gaul and move swiftly down into Italy to cut off his rival, Pompey, and assume complete power in the Roman Republic. The government of the Republic was corrupt and chaotic. The practical question was not whether the Republic could survive, but whether the future of the Roman state would lie in the hands of Caesar or Pompey. Both men decided the question in their own favor, but Caesar made his decision stick. In these narrow terms, the present form of the unit focuses on the first three months of 49 B.C., and on Caesar's audacity as a political and military actor.

Even so, the unit's present form offers much more than this. Its tools are beguilingly simple. In them lie more complexity and challenge than first appears. The event is described--at some distance--in a number of ancient sources: Plutarch, Suetonius, Lucan, Appian, and Dio. We have drawn selections carefully from some of these sources for use as data in the unit. Infinitely more important, the event was described at the time from two completely divergent political points of view by two of the principals in the great struggle over the Roman state: Caesar himself and Cicero, Pompey's advocate--scholar, litterateur, and sensitive, indecisive man of peace. Caesar's Civil War and Cicero's Letters give us contrasting reports of the same event, seen from quite different perspectives. We have drawn parallel brief selections from Caesar and Cicero as the heart of the unit's data.

In addition to these documentary data, the present form of the unit includes other simple tools. One is a modern auto map of Italy (Esso Italia); with this, each student can easily trace Caesar's swift march down the eastern coast of Italy to Brindisi and then to Rome. Searching out the connections between ancient place-names and modern ones is part of the fun. Another kind of simple but helpful aid is afforded by classroom sets of United States Army topographic maps of Italy. These are relatively small, very light, sectional relief maps pressed out of plastic material [excerpt from teacher-student discussion in one classroom - Teacher: "This is the way from Ascoli, south. Put your finger on Ascoli and Corfinium, on the relief map. Feel so you can feel the route. Can you find a place called Penne between Ascoli and Corfinium?" Students (several, touching the contours of the route, excited): "Got it!"] The tactile approach to map reading may not be sophisticated from a geographer's point of view, but it certainly helps one gain a sense of the real terrain, much of it very rugged, through which Caesar moved his men as much as 35 kilometers a day.

A most important set of materials for the unit in its present form is a series of color slides made from pictures taken for us by a Life Magazine photographer. With the help of a classics scholar, Gerald Else of the University of Michigan, some 275 photographs were taken covering the route of Caesar's march from Ravenna to Rimini and then far down the coast to Brindisi. Some of these pictures are superbly beautiful. All of them contribute a vivid visual impression of the terrain, the landmarks, and the physical setting of the march. We use only a portion of the slides in the unit at present. These are not employed simply for pictorial ornamentation, but as part of the problem-solving exercises in which the unit engages students. For example, at the beginning of the unit, slides, documents, and maps are used to examine Caesar's decision to break out of his jurisdiction in Ravenna, just across the border from Italy proper, cross the Rubicon, and enter Rimini. In addition to the study of his main decision to move at all, the records give us a chance to try out our minds on a number of smaller, essentially historiographic puzzles.

Take the crossing of the Rubicon, for instance. Plutarch--who certainly wasn't there--tells us Caesar crossed the stream which runs between Ravenna and Rimini and said "the die is cast." Lucan--who wasn't there--makes a big do of the crossing in his Pharsalia, describing in detail how Caesar stood his cavalry across the stream "to break the current's force" so footsoldiers could get over, and quoting exactly what he thought Caesar said once across. But Caesar's own description of his move from Ravenna into Rimini is most matter-of-fact and makes no mention of the Rubicon, crossing it, or saying anything quotable for the occasion. And Cicero's correspondence, immediately after learning of Caesar's move, mentions nothing about the Rubicon. We don't get much help from the Esso map either; on it, the Rubicon carries no name at all. As we dig into the matter by referring to reference works and more detailed maps, we learn that the river now called the "Rubicon" is not necessarily the Rubicon that Caesar crossed. It was Mussolini who arbitrarily decided on the present Rubicon sometime after having crossed his own. Our hunch is that he was right, but no one is sure. Our slides first show the Rubicon today, using Lucan's word, as "modest." It is a nearly dry creek. Then a slide shows the stream at torrential rain-filled flood, as it may have been for the crossing.

In all of this little study of an episode which has long been one of our symbolic cliches, the "crossing of the Rubicon" turns out to be a somewhat more complex puzzle than one might have thought. Texts of contemporaries differ radically from those of commentators like Plutarch, who was born a century after the event. How much can we be sure of? How? Students in effect are faced with the historian's own problem and even with some of the data he would be likely to analyze. They are not given in this episode, nor in the rest of the unit in its present form, any neat, predigested answers or ultimately explanatory "adult" narrative. Students are faced with a series of small and large open-ended problems to try to resolve themselves.

As the unit now exists, its main thrust is not towards microscopic examination of questions like the Rubicon affair, but towards a larger matter. This is in the direction of confronting, through Cicero and Caesar, two fundamentally different styles with regard to power, polity, and political life. Students are led into a debate over rival philosophies of government by studying Cicero and Caesar; they come to this debate through an historical event which they test for reality themselves. They see Cicero as a man thinking of government in a context of principles, constitutional forms, and ideas. In the crisis precipitated by Caesar's action, they find Cicero beset by conflict and uncertainty. I trust that to some extent they see Cicero as an "institutionalist" and Caesar as an "instrumentalist," to use Dickinson's contrast.(54) They find that Caesar did not think so much in terms of principles or long-run policies but more in terms of objectives and results. He had a view of government and an approach to problems totally different from those of an analytical, reflective thinker like Cicero. His "political conceptions and his theory of government are not to be found in what he wrote but in what he did."(55) Does this mean that Cicero was weak and Caesar strong? Does it mean that a strong, decisive approach to the problem of power always is best? Does it mean that ideas and principles constitute an unreal and weak way of looking at politics? Such questions come naturally out of the present Caesar unit. Students working with the unit have found this so.

From this beginning, we are presently intrigued by the possibility of building a somewhat larger unit of instruction around the death of the Roman republic and what it shows about the potential contrasts of the ideal and the real in politics. As I mentioned earlier, we are distrustful of a "copybook civics" approach to politics and governance. There is reason to believe that an aridly ideal picture of the political process given to young people can all unwitting be a preface to cynicism when they discover that political reality and its attendant failings are all too human. A study of the ideal and the real in Rome at the end of the republic and the beginning of the empire may help children grasp something of the values and shortcomings both of Cicero's style and that of Caesar.

Our thinking about an expanded unit is still very tentative, but we believe that it might take the following form. Part I would be a tightly and carefully edited selection of original sources in the republican period, contrasting the ideal and real. The aim of Part I would not simply be to compare sources but to help students construct their own diagnosis of the conflict between the ideal and the real. In Part I they would construct a picture of the pathology of politics in the republic, what one of my colleagues calls "a woeful tale." For the ideal, we would draw upon Polybius and Cicero. Polybius emphasized the significance of equilibrium and interdependence among the several divisions of the government of the republic. But he failed to see that the senate was actually supreme and that its powers were largely a matter of superior political experience and prestige rather than of law. Cicero's Republic and his Laws show his theoretical admiration for the constitutional equilibrium praised by Polybius but suggest that in actuality he felt the best government would be one administered by a sort of philosopher-king (Pompey?) in association with the senate. For the real, there is much to draw upon. Cicero's own Orations Against Catiline, Sallust's History of the Catiline Conspiracy, Quintus Cicero's pamphlet for his brother on electioneering in Rome, and other materials could be drawn upon. The state of the real government of the republic may be illuminated by discovery that even Cicero, several years before writing his Republic, could bank the equivalent of $100,000 as a result of one year as governor of Cilicia.

Part II of the next version of this prototype unit would be made up largely of the material on Caesar and Cicero in the present version. To the extent that we can, by drawing upon Catullus and Sallust, we will give the new Part II more depth and ambiguity than it now has. Part III of the unit would use as its principal material Shakespeare's Julius Caesar. Oriented as to time, place, and personalities, we believe that children will be likely to read this play with more comprehension and speed than is usually possible. By comparing Shakespeare's treatment of certain carefully chosen incidents with the sources he uses, children can discover in a very real way the craft associated with art, rather than simply taking it on faith that Shakespeare was a great man. Students can argue about Shakespeare's presentation of characters and motives; they have as good grounds as anyone.

We think that Part IV might well be built around the Res Gestae of Augustus. When Caesar is dead, as the play clearly shows, political chaos ensues. The ultimate solution to this state of affairs is the rule of one man, the same solution Caesar seemed to propose. The Res Gestae of Augustus is the most authentic important example of ancient autobiography extant. His original inscription, set up in Rome outside the family mausoleum in 14 A.D., is now lost. But a copy in Latin and Greek, known as the Monumentum Ancyranum is inscribed on the walls of his temple at Ancyra (Angora) in Asia Minor. In the Res Gestae Augustus states with cold reserve his own public acts as the single head of state and the honors which the senate bestowed upon him. In the simplest and most authentic way it shows how, after the death of the republic, total political power was centralized in one imperial role.(56)

In selecting case studies for the units that make up Inventing the Western World we shall pay attention to the need for students to have a picture that does not consist of mere fragments. We know that there will have to be ways in which episodes and case studies can be set in the larger context of the West's development. In the course I have been describing, we have only begun to think about this pedagogical problem. We have thought about one interesting possibility; to tie the study of the invention of the West to the study of one place, the city of Rome. To a remarkable degree, the cultural and political stratigraphy of the entire West is there to be found, layer by layer, from earliest Rome to La Dolce Vita. It has been said that the history of Rome is, in a certain sense, the history of the world. Without going that far, we think that it might be interesting to use Rome as a point of introduction and frequent point of connection for much of this course.

From Subject to Citizen

The pivotal course in the three year sequence has as its theme, From Subject to Citizen, and is intended for use in the eighth grade or thereabouts. Given the central political science concepts which underlie our junior high school sequence, it is natural that From Subject to Citizen should be heavily concerned with political culture and changing relationships of power.

The course draws its material from seventeenth and eighteenth century British and American experience. Its limits in historical time are the closing years of the reign of Elizabeth I on one hand and the accession of Jefferson to the American presidency on the other--roughly from 1588 to 1801. But as the reader will see, the course is far from a narrative account of these two centuries in England and America. Instead, it is a series of six studies in depth or units dealing with major developments and critical episodes in the emergence of a changed political culture in the two countries.

Both in England and America, political culture changed significantly during this period, moving differentially from a predominantly subject culture towards a participant culture. Such movement occurred in England in the turmoil of the seventeenth century and was consolidated and stabilized in the period of the Glorious Revolution. During the eighteenth century, underlying social and economic forces in England to some degree continued the movement. But it took the upheaval of later industrialization to accelerate change and cause further significant alteration of the overt political system of England in the nineteenth century. In

America, the movement from a mainly subject culture to one mainly participant in nature was much more rapid, with earlier significant alteration of the political system to make it congruent with cultural change. The reasons for a differential momentum of change in political culture in America were many. The English heritage which colonists brought with them itself contained the seeds of change. Likewise, seventeenth century change in the English political culture and political system had important consequences in America. Most important of all, the drastically different conditions which Colonials encountered in the new world and the life they developed in response to these conditions combined to change their political culture more deeply and rapidly than even they first recognized.

The six units of From Subject to Citizen are organized and related to each other in ways which make it possible for students to analyze and generalize about change in political culture, to hypothecate causes, and to examine values. None of this turns out to be very simple. But with conceptual tools at hand, and with abundant opportunity to use hunch and reason in the pursuit of inquiry, our students seem to thrive on what really is a complex business.

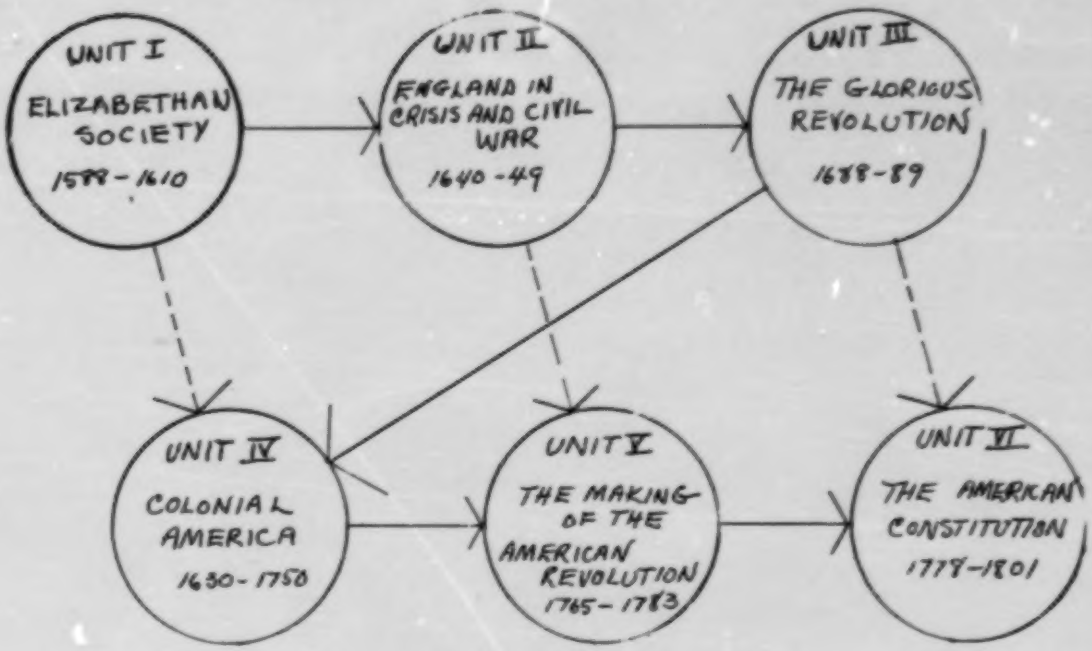
Perhaps this is because the traditional eighth grade course in American history is what it is, and children find that materials which are more courteous in Bruner's sense are more worthy of response. The traditional eighth grade American history course depends heavily on a single hard-cover text book, the same for all students. The book--and, from whatever publisher, the book will be really very much the same--is a chronological account with a degree of topical organization. It contains a greatly condensed, predigested summary of "everything important" in all of American history. This is as preposterous to attempt as it is appalling to see executed. In the process of attempting and executing its design, the text book becomes a fearful thing. It may contain stretches of good narration, but it is principally a series of lifeless abridgements. It has to be so, because American schools and book manufacturers are presently locked into a customary system which to them seems to require that all of American history be "covered" in each of three grades, usually the fifth, eighth, and eleventh grades.

"Coverage" is the b̀ete noir of the harried teacher who feels that somehow she must get the children through the whole book. To the degree she doesn't, she feels that her students have not "done" American history. There is really only one way to try to do a job so conceived: that is to assign compulsory chunks of the text to be read, to have recitation or discussion on what is read, and then to quiz to determine short-term recall of what is read. As the school year proceeds, the teacher acquires a desperate sense that even this simple method of forced ingestion and induced regurgitation is not going to give enough time for the Leif Erikson to Lyndon B. Johnson "coverage" she feels she must accomplish. And so it goes traditionally, with a mechanical rabbit of "coverage" always beating the greyhounds, no matter how fast they run. Teachers are frustrated by the system, and children become bored with the whole sorry business. By "covering" Columbus in the fifth, eighth, and eleventh grades they are apt to feel that they have had it--without ever genuinely getting at anything crucially important or exciting.

I have exaggerated, but not much, to underline the difference between our approach and the traditional one. From Subject to Citizen avoids wholesale coverage and the abridgements it neccesitates. Deliberately, we have chosen two critical centuries for study. And within the period from 1588-1801 we eschew linear, one-damn-thing-after-another history, in favor of a series of six studies in depth. These have a general connection because of the logic of the conception of political culture-change. We will connect them further by selected brief narrative and background materials, and some teachers may wish to use the units in conjunction with selected readings from a text book. While we have not gotten into the matter, it might make eminent sense for an initial study of pre-1600 America and its relations with Europe to be the focus of an elementary course. Similarly, we hope that a senior high school course might concentrate on features of American historical development in the nineteenth and twentieth centuries. But we are sticking to the two hundred years in which some basic American political attitudes, behavior, and institutions took form. We avoid abridgement as far as we can. Our units concentrate on giving students as nearly authentic material as we can manage, giving it to them in relatively unstructured form, and challenging them to discover whatever structure it may have. We ask students to perform as historians and social scientists, not as stimulus-response mechanisms.

The organization of units in From Subject to Citizen is reflected in the following diagram. Units, if taught in full, may vary from four to eight weeks in length, but usually should take no more than five or six weeks to teach.

Unit Sequence in From Subject to Citizen


UNIT I
ELIZABETHAN SOCIETY
1588-1610
UNIT II
ENGLAND IN CRISIS AND CIVIL WAR
1640-49
UNIT III
THE GLORIOUS REVOLUTION
1688-89
UNIT IV
COLONIAL AMERICA
1630-1750
UNIT V
THE MAKING OF THE AMERICAN REVOLUTION
1765-1783
UNIT VI
THE AMERICAN CONSTITUTION
1778-1801

As one can see, the ordering of the units is deliberately intended to relate English and American experience. It seems clear to us that any study of the emergence of an independent American political culture and governmental system must occur in part in a context of related English experience. Thus, each of the first three units, based largely in seventeenth century English history, has its counterpart or analogue in one of the three units dealing with eighteenth century America. Unit I, for example, has its counterpart in Unit IV. In both of these units we approach the question of general culture and the character of political culture. Unit I, which is given direction by Louis B. Wright with the assistance of Jean Dresden Grambs, opens up for study salient social, economic, and political features of the late Elizabethan social order. The material of this unit is principally occupied with ideas about society and government which migrated from England to the colonial world. In Unit IV, where Edmund S. Morgan is our senior scholar, colonial society is studied to see how it diverged from English society and in particular to examine the foundations of a new participant political culture which ultimately predisposed colonists to independence and the formation of a new political system of their own.

To some degree a comparable analogy exists between Unit II and Unit V. In Unit II we are drawing substantially on the work of C. V. Wedgwood and are dealing with a moment in England's history when conflict of political cultures led to the violent overthrow of one political system and its replacement by another. Unit V, The Making of the American Revolution, heeds what John Adams said in 1818, that the American Revolution was made in the minds and hearts of men and was, in a valid sense, over in 1776. Our object is principally to investigate developments between 1763 and 1776 which led significant Americans to conclude that the colonies must separate from the English political system and become independent. We are not preoccupied with the War of Independence, except insofar as the intervention of France was a decisive factor. This unit has had the guidance of Bernard Bailyn, Carl Bridenbaugh, and Edmund S. Morgan. Units II and V raise questions about why and how men come to oppose constituted authority and to follow their opposition across the threshold of violence in the form of war. Questions of power relationships and political culture are at the heart of both units.

Both Unit III, The Glorious Revolution, and Unit VI, The American Constitution, are occupied with the study of how a revised or new system of power is arranged and rationalized. The Glorious Revolution was, of course, not a violent conflict but a settlement or resolution of conflict which had kept England in turmoil for the best part of a century. It marked the constitution of a political system on such consolidated and clear terms that great stability ensued; there were no substantial changes in the English political system until after the 1830's. Our principal scholars for this unit are Crane Brinton and Michael G. Kammen. Unit VI, The American Constitution, is analogous in the sense that it deals with organizing a satisfactory new political system to replace the one rejected by the successful war for independence. Constitutional and governmental philosophies which had been used in justification of The Glorious Revolution played a part in our own constitutional period. Similarly, the success of our constitution makers in resolving vexing problems of authority and governance resulted in a high measure of continuing stability for the American state.

Among these units within From Subject to Citizen, the most advanced in preparation and testing is Unit IV, Colonial America. Each of the six units differs from the others in specific features, but all share enough in style so that a review of Unit IV may illustrate the way we are moving with the whole course.(57)

The design of the Colonial Unit is controlled by the concept of political culture changing over time. The political components of the general culture that English settlers brought with them to the New World were chiefly, but not exclusively, subject-oriented. In the course of their encounter with the wilderness and in settling it, their general culture diverged from that of England, and its political components became increasingly participant-oriented. While still thinking of themselves as Englishmen, the colonists became Americans.

In one sense, the Colonial Unit is preoccupied with the emergence of a distinctive American general culture. It allows students to discover answers to the question, what, then, is the American, this new man?, posed by the eighteenth century French observer, deCrevecoeur. But the unit is not principally an exercise in the study of national character or sectional differences in American character. The real object of the unit is to explore conditions under which an American participant political culture emerged.

As a unique general culture developed, retaining many English features and incorporating regional differences, the significant thing for our purpose is that the new political culture of the colonies became incongruent with the English political system. At length, lack of congruence between the American political culture and English political system became so sharp that conflict between the two was a customary fact of life and revolution was in prospect.

The particular historical material of the unit and the concepts of general and political culture central to its design are not used solely for informational ends. They are vehicles for giving students experience in studying causality, value processes, and the formation of defensible explanatory generalizations. Given all these considerations, let's examine selected materials of the Colonial Unit.

For example, consider Part IIA of the Colonial Unit, "Sudbury: A Case Study in New England Land Settlement." Underlying the conception of this part of the unit is a generalization about the causes of change in early American political culture expressed by Professor Morgan:

> ...widespread ownership of property is perhaps the most important single fact about the Americans of the Revolutionary period. It meant that they were not divided so widely between rich and poor as the people of the Old World. Standing on his own land with spade in hand and flintlock not far off, the American could look at his richest neighbor and laugh...Ownership of property gave not only economic independence but also political independence to the average American. In every colony that was to join in the Revolution there was a representative assembly, elected by property holders, which made the laws and levied the taxes. Historians have often assumed that the property qualification confined the sufferage to a small segment of the population. But if most men owned property, as now seems probable, then most could vote.(58)

Part IIA on "Sudbury" is a consumable booklet of some 58 pages in length. "Sudbury" begins with a retrospective look at the conditions of life and land use characteristic of the countryside in medieval times. A typical medieval English manor, Ashmore, is described and depicted by a map. Students examine the open field system of land use in medieval Ashmore, identifying the responsibilities and rights of the peasantry who tilled its soil. Through an excerpt from Eileen Powers' Medieval People, students then read about and discuss the life of a medieval peasant named Bodo. Reading about the way Bodo lived, what he knew and did not know, what he could do and could not do gives students a vivid sketch of the open field manorial system in the most concrete human terms. Bodo was part of a parochial-subject culture in which land ownership and political participation were equally unavailable to him. The retrospective look at farm life in the medieval period also uses a set of six glowingly beautiful postcards from the Book of Hours of the Duke deBerry. These cards are taken from originals presently in Chantilly; while French, the pictures allow students a pictorial representation of medieval social hierarchy from serf to seigneur which was equally typical of manorial life in England at the time.

Against this retrospective backdrop, "Sudbury" takes students through a fascinating series of events in the life of one real man, Peter Noyes, who moved from England to America in 1637. Thanks to Pulitzer Prize winner, Sumner Chilton Powell, we know a great deal about Peter Noyes.(59) The facts of Peter Noyes' life in England and America, and other information we have about the town of Marlboro, give an invaluable case record of the rapid diffusion of land ownership which accompanied settlement of English colonists in New England. Peter Noyes is studied in Weyhill, England, the open field manorial village from which he came. He is then studied at Watertown, in Massachusetts, where he first settled. We follow him to Sudbury, where he finally settled and where the Noyes family remains today. A group of men who were with Noyes in Sudbury are then followed to their settlement of the new town of Marlboro, a few miles farther west.

The case study is not a long didactic presentation. Instead, step by step, as Peter Noyes moves from Weyhill to Watertown to Sudbury--and as others move farther to Marlboro--relevant records of the time are used. These include land distribution lists, maps, town voting records, and the like. Students work through these materials, formulating hypotheses step by step as they go. In the process, they encounter an evident breakdown of medieval concepts of social status and land rights. Common land ownership in a ranked society gives way to individually-owned land in a much more mobile society. "Sudbury" involves students in speculating about factors that conditioned the distribution of land, and has them try their own hands at dividing up land and comparing their own divisions with divisions that were actually made by colonial settlers. They generalize about the causes of change and the democratization of land ownership; in addition they hypothesize about the relationship between increasing equality of land ownership and political attitudes and behavior. A supplement to "Sudbury" uses colonial materials to enable students to contrast land settlement in Virginia with that in New England.

Part III of the Colonial Unit adapts the technique of simulation and gaming, often used at the level of graduate instruction, for getting inside the mercantilist economic and political system of the British Colonial Empire in the eighteenth century.(60) The game of Empire engages students of the entire class in team play of trading relationships, using commodities, prices, tariffs, and other information from the late 1730's. Factors of competition, smuggling, negotiation, time delays of travel and transportation across the Atlantic, and other matters are taken into account. Each student is asked to become a member of one of five interest groups who traded in the eighteenth century within the empire: the London merchants, the Colonial farmers, the New England merchants, the Southern planters, and the West Indian planters. For each team, the aim of the game is to increase its own wealth. The game takes a minimum of four to five class hours to play; at the end of play that team has won which has increased its original wealth by the greatest percentage. Teams negotiate trading contracts between each other, and goods are exchanged by sea on a large table map prepared for us by the American Geographical Society. Two students manage the clearance of contracts and the timing of travel on the map itself. A team's cargo may be lost at sea by chance (storm, piracy, other disasters), and the political power of England is felt both through import-export duties and the protective strength of the royal navy. Students experience London's monopoly of manufactured goods, confront arbitrary trading regulations, choose whether to risk smuggling or not and see the delays imposed by trans-Atlantic voyages.

As students play the game of Empire, they are backstopped by other parts of the unit which make them more familiar with their eighteenth century counterparts. For example, one piece of material, "on the business of being a New England merchant," is a fascinating series of communications between Joseph Lee and Company and Captain Zacharia Burchmore, who commanded the company's ship, The Union. Another piece employs materials from George Washington's life to suggest what it was like to be a Virginia planter. Students begin with George Washington's description and map of his plantation, Mt. Vernon. They examine notes from his diaries and letters to his agent in London. They see what his daily tasks were like, who the people were who worked on the plantation, and they examine Washington's views on slavery, presented in his will and in some of his correspondence.

Among its other materials, the Colonial Unit contains a packet contrasting colonial government in theory with colonial government in practice. Visually, the theoretical structure of imperial control over the colonies is presented. It all looks nice and neat and orderly. Against this theoretical structure, students are asked to compare three brief case studies of colonial government in practice. The Spotswood Case (Virginia, 1715), The Burnet Case (Massachusetts, 1728) and The Clinton Case (New York, 1747) all show a sharp contrast between practice and theory. In each case a colonial assembly resisted a royal governor and showed their indifference to his "power." By working through these materials students discover that ought and is are not always the same in government and politics, and that a political system which does not fit a political culture is likely to have its troubled moments:

> Administration of the colonies was left to the King, who turned it over to his Secretary of State for the Southern Department (whose principal business was England's relations with Southern Europe). The Secretary left it pretty much to the Board of Trade and Plantations, a sort of chamber of commerce with purely advisory powers. The Board of Trade told the Secretary what to do; he told the Royal Governors; the Governors told the colonists; and the colonists did what they pleased.(61)

The Civic Culture

The least developed of the three courses in our sequence is the third, which we call for present convenience, The Civic Culture.(62) As we presently conceive it, this course will build upon From Subject to Citizen by examining the nature of modern American political culture, its evolution and effects in the nineteenth and twentieth centuries, and its contemporary problems and prospects. We distinguish The Civic Culture in many basic ways from usual ninth grade courses in civics. The concept of civic culture is a specific application of the concept of political culture. It has been described as "a pluralistic culture based on communication and persuasion, a culture of consensus and diversity, and culture that permitted change but moderated it. This was the civic culture."(63) It is:

> Not the political culture that one finds described in civics textbooks, which prescribe the way in which citizens ought to act in a democracy. The norms of citizen behavior found in these texts stress the participant aspects of political culture. The democratic citizen is expected to be active in politics and to be involved. Furthermore he is supposed to be rational in his approach to politics, guided by reason, not by emotion. He is supposed to be well informed and to make decisions--for instance, his decision on how to vote--on the basis of careful calculation as to the interests and the principles he would like to see furthered. This culture, with its stress on rational participation...,we can label the "rationality-activist" model of political culture. The civic culture shares much with this rationality-activist model; it is, in fact, such a culture plus something else. It does stress the participation of individuals.... But there is something else.(64)

Some of the "something else" is that the civic culture is a participant culture to which the participants feel allegiance. In it, the political culture and the political system are congruent, not in conflict. Another part of the "something else," is that the civic culture contains within it a mixture of subject and parochial as well as participant orientations. The real civic culture is not a simple, idealized, all-out participant affair. Attitudes favorable toward participation in the political system have a major part in the civic culture. But they are fused with and balanced by essentially nonpolitical attitudes (e.g., trust in people, privatism, etc.) which tend to give the civic culture a certain stability and sanity along with its capabilities for activity and change. The civic culture is part of what the West has given to the world. Its development in the United States and Great Britain--and in different ways in Switzerland, Scandinavia, and the low countries--is advanced more than in other parts of the world. Its future is problem-filled and uncertain. The most attractive features of the open polity and the civic culture are that they represent man's discovery of a "humane and conservative way to handle social change and participation..."(65)

As we see it now, in various ways a course with this conception in mind will seek to get at the following things:

1. The Nature of the American Political Culture. The course will seek to make more explicit that the central characteristics of American political culture grew out of the experience of Americans, who were mainly Anglo-Saxon Protestants, in the circumstances of the seventeenth and eighteenth centuries. Discovery of ways in which a political culture is part of a larger culture will be encouraged by the materials of the course. Characteristics of the American political culture which the materials will enable students to explore will include such things as widespread participation, vast diffusion of power, multiplicity and diversity

of expression of group interests, the functions of nationalism and patriotism, egalitarianism, and the secularization of the political system.

2. The Centrality of Political Culture in American Life. The course will emphasize how important politics is and has been to Americans as an essentially non-ideological feature of our social experience. In this connection, it will focus on the power of the political culture, illustrated by the tremendous demands it makes on immigrants who must conform to it. The course will underline the primacy of the civic culture in the process of Americanization: here a man defines his Americanism by adapting to the beliefs, style, and action which are accepted elements of the political culture.

3. The Process of Political Acculturation. Some of what is intended here is suggested in the paragraph above. The point, however, is not alone that all groups have had to accomodate themselves to the powerful centrality of political culture in American life, but that they have brought this accommodation off so well. Diverse nationality and ethnic groups entering American society from far different general and political cultures have had to conform to the civic culture and to pay the price of admission. In so doing, however, they have exhibited an amazing amount of versatility and ability to learn to use the opportunities of a participant system. Here we are familiar with the ethnic group political bloc, consciousness of ethnic group interests, foreign language newspapers, ethnic group political leaders, and the like.

4. The Problems of Special Sub-Cultures. In at least one instance, the course will deal with the difference between general acculturation and political acculturation. Roman Catholics, as a religious group, found their way into the general culture with less difficulty than they did into the political culture. In many sectors, frequently depending upon the strength of their ethnic group base, Roman Catholics were able to enter into the political culture and system as effective actors in the nineteenth and early twentieth centuries. But so strong was the Protestant flavor of the American political culture that it was not until 1960 that a Roman Catholic candidate could be elected President of the United States. Noticeably, no practicing Jew has ever been a serious contender for the presidency.

5. The Problems of the American Polity. The course will aim to explore some of the great unresolved problems of the civic culture. Among these certainly will be the lack of resolution of the American Dilemma: the continuing inability of the political culture and polity to resolve the problem of citizenship for American Negroes.

It is possible that the materials of the course will be designed mainly to allow students to explore how the American political culture reacts to, overcomes, and absorbs the political culture of immigrant groups. If the course does this, we will hope to develop the cultural empathy in students which can come from a recurrent awareness of the differences of other groups and their struggle to enter into the general and political culture of our society. Materials for such a course are rich. There are memoirs, letters, diaries, and novels by immigrants and by those rooted in the established political culture. There is also the rich material of foreigners visiting in the United States. Now, we also have quite rich primary material of Americans who are living overseas and experiencing cultures at radical odds with our own. There is the passionate literature of Negro protest. For students, there is a superb opportunity in this conception of the course for autobiographical work. They can find out more about their grandparents, their great grandparents: Where did these relatives come from? What were their views on politics? What kind of political life did they have in the old country?

We feel that The Civic Culture as a course should help students develop an increasing sophistication about sociological and anthropological conceptual tools. Here, more than in the preceding two courses, we would aim for straightforward study of such concepts as role, status, class, stereotyping, etc. Again, the course should reassert in more direct fashion than before the central concept of political science, that of power. By concentrating on the experience of groups, immigrant and Negro, engaged in the struggle for political acculturation, students may see how deprivation or fear of deprivation combined with an awareness of the possibility of remedy through political action are powerful sources of political behavior.

The plans for the course, as I have said, are still in a very formative stage. Those who are engaged in the planning are moving in general along the lines that I have indicated here. One of the basic principles we have followed in the whole of the Social Studies Project is that one defines one's position best by acting. Therefore, there is at present less concern about the fine contours of the total course than there is for developing a prototype unit which can be tried out in classrooms. The group engaged with this course currently is concentrating, therefore, in exploring possible forms which might be taken by a unit on the struggle of the American Negro for full citizenship in the American polity. The first versions of this unit are still so tentative that I will not detail them here.

Summary

I have been able to give, in this description of the junior high school phase of the E.S.I. Social Studies Program, only a touch of the story. There is much more to tell about. I would like to describe the way disadvantaged children at Gaynor Junior High School in the Williamsburg section of Brooklyn were able to handle--aided by an excellent teacher--the Subject to Citizen materials. It would be good to be able to record at least some of the innumerable contributions that have been made to our work by Joseph Loretan and the New York City public schools, by Charles Brown and the Newton (Massachusetts) public schools, and others in the field of education. Some of our debt to teachers and children in the Bronx, in Jefferson County, Colorado, in Boston, and in at least two score other places should somehow be set down. Literally dozens of teachers and scholars could add much to the telling of the story, since in great part it should be their story to tell. They know, as I have tried to suggest in these pages, that social studies need both first aid and long term rehabilitation. And they have helped mightily to get both processes going.

In the junior high school phase of the E.S.I. Social Studies Program, we have proceeded from what is known about intellect and the role of discovery in learning. I have indicated that we are more interested in the increase of general intellectual discipline and the strengthening of factors of intelligence than we are in retention and recall of subject matter for its own sake. We are interested in social studies curriculum which will give children opportunities to discover regularities and uniformities in the social universe around them. We are looking for curriculum materials and exercises through which children can experience the thrill of conscious generalization, and come to general statements whose utility will help them order phenomena in other times and places. We are keen for students to get their hands on the idea of causality and recognize that multiple causation is the state of affairs safest to assume. As I have said, we are aiming to heighten an awareness of the part values play in all of social experience, and to increase the capacity of students to determine their own values.

Our basic orientation in building curriculum models for the junior high school is political. The theme is Aristotelean: Man As a Political Being. Our reasoning, as noted in connection with the research of Easton and Hess, is that early adolescence is a critical period in the stabilization of an American child's political development. The evidence suggests that the school is the most important agency through which political socialization is effected by formal means.

With this thinking in mind, we have used two principal concepts of modern political science as the organizing ideas for social studies curriculum in the junior high school: power and political culture. In addition to the historical data which our courses and units use, one should emphasize that power and political culture, even if not consciously conceptualized, are part of the texture of life in the classroom, the school, the street, and the home. An unending supply of subject matter involved with power relationships and political culture is at hand to study in the here and now, face-to-face world. We will expect that teachers and students will frequently relate past questions of power and political culture to present instances available in their experience.

I have suggested how and why we are using selected historical materials in a sequence of three courses, Inventing the Western World, From Subject to Citizen, and The Civic Culture. Certainly no perfect case is pretended for this overall design nor are we shooting for what one friendly interrogator called a "wall-to-wall curriculum." Man As a Political Being is simply a roughly coherent but highly flexible framework within which we can construct model materials. At the very least, we find it exciting to try.

In sum, I would say the following things about the work we have done so far. At their best:

- Our materials tend to be selectively related to ideas which arise out of the work of scholars who deal with the study of men and society.
- They tend to provide children with the kinds of data that scholars themselves work through in their own quest for meaning.
- They tend to present these data in ways that demand inductive as well as deductive analysis.
- They tend to give children an opportunity to discover structure in the relationship of ideas to each other and to find and cope with disparities and dilemmas among competing ideas and conflicting data about society.
- They contain opportunities for learning to handle social science data and ideas in economics, sociology, anthropology, political science, psychology, and archaeology.
- They are conceived in good measure with an inventiveness that is quite unusual, and with a sense of what may catch the curiosity and imagination of children.

-- The materials are selected--whether as evidence from the past to give some feeling for the continuities of human experience or from the present to give some sense of the contemporary world--always with the idea that to increase the power of the student to deal with the modern condition is the end in view.

Footnotes

1. John Holt, *Why Children Fail*. New York: Pitman Publishing Corporation, 1964, p. 176.

2. "The practical requirements which underlie every historical judgment give to all history the character of 'contemporary history,' because, however remote in time events thus recounted may seem to be, the history in reality refers to present needs and present situations wherein those events vibrate." Benedetto Croce, *History as the Story of Liberty*. London: George Allen and Unwin, 1941, p. 19. See also Herbert J. Muller, *The Uses of the Past*. New York: Oxford University Press, 1957, p. 33: "In piety and justice we try to see [the past] as it was, or as it seemed to the men who lived it, but even this poetic interest is not disinterested; in our contemplation of the drama we see what is most pertinent for our own hopes and fears. Hence the past keeps changing with the present....Our task is to create a "usable past," for our own living purposes."

3. The discussion which follows draws from J. P. Guilford, "The Three Faces of Intellect," *American Psychologist*, 1959, vol. 14, pp. 469-479. The three dimensional model presented here is modified slightly to provide clarity in a necessarily abridged summary.

4. *Ibid*., pp. 477-79. Italics mine.

5. Jerome S. Bruner, *On Knowing: Essays for the Left Hand*. Cambridge: Harvard University Press, 1962, p. 82.

6. *Ibid*., p. 87. Bruner refers to this statement as an hypothesis in need of testing--an hypothesis we cannot afford not to test, and one which must be tested in the schools.

7. *Ibid*., p. 88 and p. 92.

8. *Ibid*., p. 94.

9. *Ibid*., pp. 94-96.

10. *Ibid*., p. 83.

11. *Loc. cit*.

12. Holt, *op. cit*., p. 174.

13. *Ibid*., p. 175, p. 179. Lest he be misunderstood, Mr. Holt does not hold any brief for the "would-be progressives, who until recently had great influence over most American public schools...." (p. 179). He is a private school teacher. Two friends, whose concern for education

I respect, have separately urged his book on me in recent weeks. In fact, the book contains a good deal of sensible and sensitive criticism of what education does to children in the schools with which Holt has had experience. But his conclusions are burdened by a simple romanticism about children and society which I thought education had outgrown some time ago.

14. Jerome S. Bruner, *The Process of Education*. Cambridge: Harvard University Press, 1960, p. 17.

15. Edward Hallett Carr, *What Is History*? New York: Alfred A. Knopf, 1963, p. 80.

16. David M. Potter, "Explicit Data and Implicit Assumptions in Historical Study," in *Generalization in the Writing of History*, Louis Gottschalk, editor. Chicago: University of Chicago Press, 1963, p. 190.

17. *Ibid*., p. 187. I am drawing here from injunctions Professor Potter offers historians; my generalization is that what he says can well fit other knowers, such as children!

18. Marc Bloch, *The Historian's Craft*. New York: Vintage Books, 1964, pp. 139, 143-44.

19. Carr, *op. cit*., p. 174.

20. *Ibid*., p. 113, p. 116.

21. J. H. Hexter, *Reappraisals in History*. Evanston, Ill.: Northwestern University Press, 1961.

22. Bloch, *op. cit*., p. 197.

23. Potter, *op. cit*., p. 181.

24. *Ibid*., p. 179.

25. *Cf*., for example, *The Language of Social Research*, edited by Paul F. Lazarsfeld and Morris Rosenberg. Glencoe, Ill.: The Free Press, 1955.

26. Muller, *op. cit*., pp. 29-30.

27. Charles E. Merriam, *The Making of Citizens: A Comparative Study of Civic Training*. Chicago: University of Chicago Press, 1931, p. 331.

28. The definition of political socialization with which Easton and Hess include the emergence of (1. affect--we attachment to the nation, (2. affective attachment to the government and its representatives, (3. relationship to the compliance system (law, law enforcement figures and institutions, etc.), (4. a sense of efficacy and the acquisition of influence skills in relation to government, and (5. involvement in the election processes and political parties.

29. Murray B. Levin, *The Alienated Voter: Politics in Boston*. New York: Holt, Rinehart, and Winston, Inc., 1960, pp. 63-74.

30. D. W. Brogan, *Citizenship Today: England, France, The United States*. Chapel Hill, North Carolina: University of North Carolina Press, 1960. pp. 4-5.

31. M. B. Smith, Jerome S. Bruner, and R. White, *Opinions and Personality*. New York: John Wiley, 1956.

32. Elting E. Morison, "Poetry and Politics." Unpublished paper, n.d., p. 12.

33. Norton E. Long, "Political Science," in *The Social Studies and the Social Sciences*. New York: Harcourt, Brace & World, Inc., 1962, p. 89.

34. Hans J. Morgenthau, "Power as a Political Concept," in *Approaches to the Study of Politics*, edited by Roland Young. Evanston, Ill.: Northwestern University Press, 1958, p. 76.

35. Charles E. Merriam, Political Power. Glencoe, Ill.: The Free Press, 1950, p. 8. Merriam's 1934 book is reproduced entire in this 1950 Free Press volume which bears the title *A Study of Power* and includes a book by Harold D. Lasswell and one by T. V. Smith.

36. Anthony F. Upton, "The Road to Power in Virginia in the Early Nineteenth Century," reprinted from *The Virginia Magazine of History and Biography*, LXII, July, 1954, in *American History and the Social Sciences*, edited by Edward N. Saveth. New York: The Free Press of Glencoe, 1964, pp. 274-292.

37. Marion E. Turner, *The Child Within the Group; An Experiment in Self-Government*. Stanford, California: Stanford University Press, 1957.

38. V. O. Key, *Politics, Parties and Pressure Groups*, 4th edition. New York: Thomas Y. Crowell Co., 1958, p. 6.

39. Merriam, *Political Power*, raises and deals with these questions in terms of general social behavior and politics.

40. Gabriel A. Almond, "Comparative Political Systems," reprinted from *The Journal of Politics*, Vol. 18, 1956, in *Political Behavior*, edited by Heinz Eulau, Samuel J. Eldersveld, and Morris Janowitz. Glencoe, Ill.: The Free Press, 1956, pp. 34-42.

41. Gabriel A. Almond and Sidney Verba, *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Princeton, N. J.: The Princeton University Press, 1963.

42. Harold D. Lasswell, *Power and Personality*. New York: W. W. Norton Co., 1948, p. 10.

43. Almond, _op. cit_., p. 35.

44. _Loc. cit_.

45. _Ibid_., p. 36.

46. Almond and Verba, _op. cit_., p. 14.

47. Talcott Parsons and Edward A. Shils, _Toward a General Theory of Action_. Cambridge, Mass.: Harvard University Press, 1951, pp. 53 f.

48. Almond and Verba, _op. cit_., p. 14.

49. _Ibid_., pp. 15-16, and p. 17.

50. _Ibid_., p. 19.

51. _Ibid_., p. 21.

52. Robert G. Hanvey, "On Raising the Standard of Learning in the Social Studies." Unpublished paper, n.d.

53. Frederic W. Maitland and Francis C. Montague, _A Sketch of English Legal History_. New York: G. P. Putnam's Sons, 1915, p. 79.

54. John Dickinson, _Death of a Republic: Politics and Political Thought At Rome 59-44 B.C._, edited by George Lee Haskins. New York: Macmillan Company, 1963. See Dickinson's splended Section III, "Rival Philosophies of Government."

55. _Ibid_., p. 324.

56. We are indebted to our colleague, Sally Scully, for many suggestions with regard to the revised unit outlined here.

57. The working party which drafted the Colonial Unit included, in addition to Professor Edmund S. Morgan of Yale, the following regular personnel: Dr. Robert Brandfon, an American historian at M.I.T.; Miss Nona Plessner, a junior high school teacher from the New York City Schools; Mr. Joseph Featherstone, a graduate student in American Studies at Harvard; and Miss Harriet Reif, also an advanced graduate student at Harvard. In addition, the working party received significant help from several teachers in New York City and Newton, Mass.; from Dr. Clark Abt, Abt Associates Inc.; from Dr. William Warntz of Princeton and the American Geographical Society; and from Mr. Peter Wolff of E.S.I. and others.

58. Edmund S. Morgan, _The Birth of the Republic: 1763-1789_. Chicago: University of Chicago Press, paper edition, 1962, p. 7.

59. Sumner Chilton Powell, _Puritan Village_. Middletown, Conn.: Wesleyan University Press, 1963.

60. For a recent symposium on techniques of simulation and gaming in graduate instruction, management, political analysis, military operations, etc., see Simulation in Social Science, Harold Guetzkow, editor. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1962.

61. Morgan, *op. cit.*, pp. 10-11.

62. The title, of course, is borrowed from Almond and Verba, *op. cit.* Scholars presently assisting in plans for this course include Lawrence Fuchs of Brandeis University, Patricia Goler of Lowell State College, John S. Gibson and Bradbury Seasholes of Tufts University, Thomas Pettigrew of Harvard University.

63. *Ibid.*, p. 8.

64. *Ibid.*, p. 31.

65. *Ibid.*, p. 9.

CHAPTER FOUR

The Senior High School Social Studies Curriculum

Morton White

The Four Elements of Education

Like all human activities, education is a complex process, consisting of several phases, parts or elements; and like every complex process it may be analyzed in different ways, depending on the interests of the investigator. For our purposes it will be illuminating to think of it as divided into four elements: 1) the teacher, 2) the students, 3) the educational goals of the teacher, and 4) the means which the teacher uses in his effort to reach his goals. If the educational reformer views the situation in this way, he may focus on any of these elements in his effort to improve the institution of education, and if he is really ambitious he may concentrate on all. He may want to improve the teacher and to improve the student as a person before the student is even invited into the classroom; he may want to define and render superior the goals of education; and he may want to better the means and techniques used by the teacher.

Now any one who surveys American society in the year 1965 must admit that American education is deficient in every one of the respects we have mentioned. It needs better teachers, healthier and happier children, clearer aims and more effective techniques; and all of these deficiencies should be remedied by whatever means are at the disposal of the society. Yet surely it would be wise to recognize that it is impossible for any limited organization to bring about changes directly on all of these fronts. It is evident, for example, that such an organization could not directly affect the child in the formative years before he enters school, nor could it be completely effective in the face of powerful family or social pressures that work in the opposite direction. Therefore Educational Services Incorporated must, by its very nature, narrow its aims to some degree if it wishes to accomplish anything. But to what, we may ask, should it limit itself?

After we acknowledge in all modesty that the child is beyond our reach from its cradle days to its kindergarten days, three elements of the educational process remain for our consideration: the teacher, his goals, and his tools.

Let us begin with the teacher. If our resources were more extensive, we could set up an elaborate system of teacher training, but so far this has not been our primary concern in the program for the senior high school. Such work may come later, and indeed, as we shall see, certain parts of our program require that it be done in some degree soon. But so far the main energies of those who are responsible for the senior high school program have been directly applied to the two remaining elements in our quartet: the goals and the tools. The teacher will be aided indirectly in so far as he can be induced to accept those goals and to use those tools.

Having decided to limit ourself in this way we must nevertheless recognize that in our efforts to improve the aims and instruments of education we must keep our eyes on both the teacher and the student. We know, of course, that if we wish to make a log that will keep even the proverbial Hopkins and his student in profitable and pleasurable equilibrium, we must know how much Hopkins and his student weigh. However, to continue the metaphor, we do not think that curriculum builders should be absolutely bound by the weight of teachers and students, as they are or as they are said to be. It is our firm conviction that they are intellectually heavier than they are sometimes said to be, and that even where they are as light as their most dour critics say they are, they can grow and put on weight if properly treated. We may confidently say, therefore, that in defining the goals of education and in fashioning new tools we are not blindly utopian, but we are forward-looking. We keep our eyes on Hopkins and his charge, not only as they are but also as we think they can become if exposed to better pedagogical food and air.

The Goals of the Teacher

With this as preface, with these declarations of modesty and ambition behind us, let us consider the two elements of education that we think are directly amenable to our efforts. The main tool upon which we have concentrated in our work so far is the curriculum: that has been our primary concern and our work on it will be described in detail below. But before turning to the curriculum, it will help to outline at least some of the goals that have been before us as we have tried to fashion the curriculum, goals that we think the teacher should also have before him.

We think of the problem of education as partly a problem of communication. The teacher wants the student to come out of school with something that he did not have before. In saying this we do not fall into the sort of formalism that has been decried in educational circles for years and years. We do not mean that we wish to stuff a wad of knowledge into the child's head. Like all processes of communication the process of education takes place between an active sender and an active receiver. The reception is not a matter of suffering, of mere passion as opposed to action, and therefore the child must do things in order to get the point. In order to hear he must listen, in order to find he must seek, in order to know he must inquire. Education is a transaction, a back-and-forth movement between teacher and student which should engage the active interest of the child, and therefore the lessons of the curriculum are things which the child must reach out for. The teacher offers and the child receives, but receiving usually requires a step in the direction of the offerer, and this thought lies at the heart of all of our work. We wish the student as well as the teacher to act.

What, then, should the teacher offer as his contribution to the transaction? What do we think of as in the curriculum potentially, as parts of the offer we think of the teacher as making? For what is the child to reach? If we can say what this is in a general way, we shall have stated a theory of the aims of education in the domain of social studies, a theory of what the teacher should try to get across to the child and what the child should actively reach for in his own education.

Let us begin by saying unabashedly that in great measure we should try to communicate knowledge. We do not have to be benighted educational formalists to say so, for we have already made clear that such knowledge as the teacher offers is not conceived of as a wad or ready-made package. Nor do we mean that knowledge is the only thing we should try to communicate; i.e., that the child who comes out of our school should emerge as different only insofar as he now knows a number of propositions that he did not know before. But surely in our reaction to what is pejoratively referred to as formalism we should not deny that we want the child to come out thinking something. If we are to reject formalism, it cannot be because we do not want him to gain knowledge, but rather because, first, we want him to gain other things besides knowledge in the narrowest sense, because, second, we want him to gain knowledge in a way that will stay with him, and because, finally, we want him to gain a certain kind of knowledge, namely important knowledge.

The question of what besides knowledge is to be imparted to the child is a vast one, and the problem of how we are to get him to learn in a manner that will keep things with him is a difficult one. Certainly we want the child to come out being, in the old-fashioned phrase, more virtuous. He should become a better human being for having gone to school. But this, we think, is not something that will happen, as some of the ancients thought, merely as a consequence of the development of his cognitive faculties or by his coming to know lots of propositions. Knowledge is surely not identical with virtue. Furthermore, we want the child to become more sensitive to esthetic values, and once again we cannot expect the purely cognitive side of his education to produce this sort of sensibility. And finally, it would be absurd to think that we can write a recipe for how to encourage the development of moral virtue and esthetic sensibility, as well as a set of rules about how to develop them in a way that will keep them in the child forever. Nor is it easy to say in a general way how to make sure that the knowledge that he learns will remain with him.

On the other hand, we cannot think seriously about a curriculum without addressing ourselves to the question: What sorts of knowledge do we wish to communicate to the child? So, with no further delay, we turn to this general question. After saying a few things about it, we shall turn to the details of the curriculum that we propose to the teacher as a device for achieving some of the intellectual goals we are now about to describe and distinguish.

In order to describe and distinguish the kind of knowledge we hope to develop, we must point out first of all that we have been working on a course in social studies which has been designed for the tenth, eleventh, and possibly the twelfth grades. It will deal primarily with social life in the West, roughly since the beginning of the nineteenth century. Our method is historical, but historical with a difference. It is our aim to get the child to see history not only as the study of individual events following each other in time, but also as a discipline which depends upon and illustrates certain generalizations about human behavior, and as a study which depends upon and illustrates certain general philosophical principles that govern research and discourse in history and the social and behavioral sciences. We conceive of the knowledge we wish to communicate, therefore, as occupying three distinct but connected levels, each more abstract than the other: 1) the level of historical fact, 2) the level of generalization in the social and behavioral sciences, and 3) the level of methodology or philosophy as that relates to historical investigation and discourse in the social and behavioral sciences. We want the child to come away with an awareness of certain important facts or events within the past, with a grasp of certain generalizations about human behavior, individual and social, and with an understanding of how such claims to knowledge are arrived at and evaluated. He should know, for example, when the Industrial Revolution occurred and what it was (Level 1); he should know something about why it occurred and how its explanation is related to certain regularities in human behavior (Level 2); he should know how we come to and test our beliefs on these two lower levels (Level 3). In saying this we most certainly do not mean that there should be three distinct courses of study aimed at goals on these three different levels. On the contrary, whatever the child learns on these levels should come primarily from a study of concrete historical events and conditions of the late eighteenth, the nineteenth and the early twentieth centuries. Only after we have completed the substantive work in social studies, will we try to get the student to turn back upon what he has learned in social studies, to engage in philosophical reflection about the whole enterprise of social studies, to try to formulate in a coherent way the network of distinctions, concepts and principles that his teacher has been employing in the construction of the course itself. After having been, as it were, a budding historian and social scientist who has been acting out a philosophy, he will be invited to step into another role, that of the budding philosopher of the social studies who can reflect upon his own activities.

Now that we have outlined the general conception of education which underlies our efforts to form a curriculum, we turn to the details of that curriculum. Now that we have described the teacher's goals, we turn to the main tool for the realization of those goals.

A Curriculum is Born

We now conceive the course of study--whether for one, two, or three years is still an open question in our minds--as divisible into three main parts: 1) the impact of technology and science on society in the nineteenth century, 2) the relationship between ideology and reality in the nineteenth and twentieth centuries, and 3) philosophical reflection on the nature of social studies. The first two parts are primarily historical, the last primarily systematic or analytic in orientation.

We took a long time in arriving at this general idea of the course, and it may be of some interest to outline the history of the deliberations leading up to our present scheme of organization. We began with the firm conviction that we should use a series of units which illustrated salient events of the nineteenth century as well as interconnections between aspects of social life, interconnections that continue to be relevant to our own times. And the first three units that emerged were as follows: one on the steam engine, one on Manchester, England, and one on Darwin and Darwinism, all of which will be described in detail below. We reasoned that the steam engine was the most important technological innovation of the period, that Manchester was a dramatic illustration of how a society could be affected by such a technological innovation, and that Darwin's work on evolution and natural selection was not only one of the most important contributions of the nineteenth century to science, but that, unlike many scientific contributions, it had enormous effect on its age, both on popular consciousness and on the general intellectual life of the period.

With these three units in mind we called a conference of a number of distinguished scholars in the summer of 1964, hoping to test the viability of these units and to seek suggestions as to how to add others in a meaningful way. Two difficulties were in the forefront of our minds when we entered that conference. We were worried about the fact that our course was too British in orientation, and also about the fact that we had not introduced enough material dealing with politics. After all, Europe is more than England, and no matter how strong the tendency of modern historians to deny that history is simply past politics, their lucubrations surely do not lead to the conclusion that politics is of *no* importance at all. These worries we *thought* were removed when the conference emerged with the idea that what we should do is to build the course around the idea of *innovation* in the nineteenth century. After all, it was argued, the steam engine was a technological innovation, Manchester represented an innovation or revolution in social organization, and Darwin a revolution in science. What better way of rounding out the whole business than to add two more innovations that would bring in the continent and politics, and the revolutions of romanticism and modernism in art and literature? With this proposal in mind we began the fall of 1964 convinced that what we had to do was to move in the direction indicated, to conscript scholars and teachers who would help us implement these proposals directly. But then two things happened to change our direction. First of all, we were advised by one historian that there were grave difficulties in the way of working up the theme of the masses in politics, and secondly, when we began to take counsel with high school teachers we came to feel that our general concept of innovation was a flimsy pedagogical reed. It was felt that it lacked something, in part because the concept of innovation was ambiguous or too general, in part because it did not help to bring movement into the course. Our various "innovations" lacked the capacity to give the teacher a theme, a unifying point, a "message" as one of them put it.

For these reasons we abandoned--or at least temporarily shelved--the idea of innovation all along the line as the central thread of the course. It may once again enter our thinking if and when someone tries to meet the objections to it, but at the moment it is in the background, replaced by the idea already mentioned as governing our present activity; viz., the idea that we should conceive of the historical part of our course as devoted to 1) the study of the impact of science and technology, and 2) the relationship between ideology and reality. We arrived at this conception by two stages, and it might be of interest to show how we arrived at it by quoting two memoranda. "Memorandum I" records the decision to create in an explicit way the theme of science, technology, and society; "Memorandum II," the decision to round out the new format by adding the section on ideology and reality.

MEMORANDUM I

> Because at the last meeting we arrived at a rather important idea about the general emphasis of our work, I thought it would be best to put something down on paper about it. The idea is that we shall think of at least one main part of our course as primarily directed toward delineating the impact of science and technology on society in the nineteenth century. Naturally, this does not mean that we think that every fact about the nineteenth century can be explained in this way. We merely commit ourselves to taking two of the most important elements of nineteenth century society and studying their effect on other parts of that society; for example, their effect on social organization, on politics, on religious thinking, on philosophy, on literature, on art, and so on. When we say "effect" we

of course do not mean that science or technology had that effect all by themselves. What impact they had they had in cooperation with a certain set of social circumstances which we also wish to describe and analyze. What, for example, were the social circumstances which encouraged some people to derive from Darwin's theory the doctrine of Social Darwinism, a doctrine which is not logically implicit in what Darwin said?

The advantages of this emphasis on the effects of science and technology are obvious. First of all, it introduces the child to the study of problems comparable to those that face us today, and thereby gives him the opportunity to think about questions similar to those that he himself must face if he is to understand and survive in his own era. What happens, he will be encouraged to ask, when something like the steam engine revolutionizes the technology and hence the economy of a period? What happens when a scientific theory like Darwin's theory revolutionizes man's view of the universe in which he lives? If the child can be led to think in detail about such questions in the context of the nineteenth century he may take a big step in the direction of understanding the impact of, say, automation in his own life-time. He may also be led to generalize sensibly about such matters.

Another advantage of this approach is that it may provide a framework within which we can encompass a good deal of material already in the course and also a technique for introducing stimulating and illuminating material not yet in it. At any rate, it is to be hoped that this new scheme will not only effectively organize the material we already have been working on, but also suggest ways in which we can move on to new terrain. For a long time I have had the feeling that the idea of innovation, under which we were subsuming so much, was not doing what we had hoped it would do--provide a unifying theme that was dynamic and exciting to curriculum-builders, to students and to teachers. I hope that the teachers will feel that our new proposal for organizing the material gives them something closer to what they have been seeking in our recent discussions. It is in outline a simple idea, but it may provide a good deal of the guidance we need. And let us remember that the idea is provisional and subject to whatever changes our future discussions may suggest. I should hope, however, that we can give it a fair, rigorous trial with an unblinking eye to the historical and pedagogical facts.

MEMORANDUM II

I thought I would set down on paper an idea that I have presented orally to some of you about a way of adding to the curriculum as so far conceived.

So far we have subsumed three units, the Steam Engine, Manchester, and Darwin, under the heading "The Impact of Science and Technology on Society", and hopefully, we will include other topics under this same rubric. But we all realize, of course, that this theme fails to embrace a lot of extremely important material, for example, an enormous part of the political history of the nineteenth and early twentieth centuries, and much that pertains to the continent of Europe by contrast to England. My proposal, therefore, is that we give up trying to subsume everything under the present rubric and add another rubric of comparable extent, one which might be called "Ideology and Reality". Under "Ideology" I include religious, political, moral, economic, and general philosophical ideas--as opposed to a scientific idea like the theory of natural selection--ideas like democratic theory as expounded in the Enlightenment, like John Stuart Mill's views on liberty, like Marxism, anarchism, syndicalism, socialism, communism, fascism, etc. And by "Reality" I mean social, political, and economic reality. My suggestion is that we devote this second over-arching unit to examining the relationship between such ideas and the actual social movements that are usually associated with them: for example, the French Revolution with democratic theory of the Enlightenment, the English Reform Movement with liberal political and economic theory, the Russian Revolution with Marxism and so on. I use the word "relationship" broadly and would include under that term such things as the influence of ideology on reality and vice versa, and the discrepancy between ideology and reality. The student would be encouraged to see social thought in action, facing up to reality, fleeing from reality, guiding it, being disappointed by it, and so on.

It seems to me that adding such a rubric would, first of all, produce an interesting and illuminating symmetry. In one case, where we focus on science and technology, we will be taking our point of departure from "hardware", whereas in the other we would be focusing on what might (unfortunately) be called "software". We would thereby show, among other things, that ideologies play an active, though not exclusive, part in the shaping of history. Furthermore, as I have already said, this approach would allow us to deal with aspects of European history and with politics in a natural way, without dragging them in as part of an afterthought or appendix.

It may well be, of course, that there are other ways of coherently including material so far excluded from the curriculum, and we should continue to think of such alternative possibilities. However, if there are no objections, I shall take steps in the direction of getting work started on the kind of unit I have described. I invite your responses to this proposal and as soon as something more concrete emerges will schedule a meeting on this topic.

A Major Part of the Curriculum Is Described

Now that we have presented the general conceptual framework with which we have been working and have also given some idea of how we arrived at that framework, it is time to describe in some detail what has been done to fill it in. The bulk of our research has been done on the impact of technology and science, and therefore most of the details to be presented below will fall under that heading. Because the section on ideology and reality was conceived relatively recently, we have not done nearly as much research on that, and because the philosophical section is the most daring and "way out" from the point of view of the conventional curriculum, we plan to work on its details after both of the historical sections have been developed more fully. In this way the philosophical section can be constructed with an eye to the substantive material included in the two historical sections, since, as we have already said, philosophical concepts and distinctions are best presented in terms of concrete illustrations which have already been made meaningful to the student. We shall now describe the existing, actively researched units on the Steam Engine, on Manchester, and on Darwin in that order, and later we shall describe the projected treatment of a) ideology and reality, and b) the philosophy of social studies.

1. The Steam Engine

Although the curriculum focuses on the nineteenth century in a historical manner, we have already made clear that our work is partly motivated by a desire to use historical material that will illustrate regularities in human behavior and hence illuminate, to some degree, the age in which we are now living. Since one of the most important features of our age is its response to the advance of technology, we think that much can be gained by studying the Industrial Revolution in England as a classic example of how changes in technology are causally related to other social changes. The rapid growth and development of Manchester will, as we have said, serve as a focus in this part of the course. The study of Manchester will illustrate in dramatic detail the links connecting technology and society during the Industrial Revolution. And therefore, before turning to Manchester in the flesh, so to speak, we wish to introduce the student to one of the great technological factors in its development, the Steam Engine, which belched, hissed and burned while Manchester became the "Cottonopolis" of the Western world. The Steam Engine was a blessing insofar as it freed man from exclusive dependence on natural sources of energy, but it also helped create great social problems in the nineteenth and twentieth centuries: problems of unemployment, slums, public health, education, government, and many others that are still with us. Insofar as we can communicate some idea of how such problems were connected with technological innovation we shall be able to introduce the student to many regularities in social behavior that are still in operation. In doing so we shall try to depict the similarities as well as the differences between the nineteenth century's responses to large-scale technological change and our own century's response to it.

Although the main concern of this part of the course will be to communicate the relationship between the steam engine and the society which it affected, we also hope to present some idea of how the steam engine worked and how it evolved. In other words, we do not want the student of social studies to think of the steam engine as a mechanical mystery into which he cannot look and whose workings he can never know. We believe that we can communicate not only its workings, but the story of how it came to be what it was to a student who may never again have much contact with the details of technology. In a sense, therefore, part of our concern will be intra-technological even though our main concern will be to link technology with extra-technological aspects of society. Too often students of history remain utterly ignorant of the insides of great technological discoveries and are content to speak of their impact without knowing just what they are. (Too often students of history remain equally ignorant of the great scientific discoveries, and therefore when we come to the Darwin unit we shall, in a similar spirit, deal with the content of Darwin's biological contributions before dealing with their impact on society.) In the course of our intra-technological treatment of the Steam Engine we hope to get the student, among other things, to see how, why and where certain inventions appeared, the difference between an inventor and an innovator, the length of time and effort generally required to develop a new idea, and the power of planned research and development.

With these goals in mind, Professors George Brown and S. William Gouse of M.I.T. have developed their materials under two main headings: a) The history of the prime mover with particular emphasis on the Steam Engine, and b) The Steam Engine as an outgrowth of and as an impetus to other technological developments and problems. Throughout, they have not assumed that the students or their teachers will have prior training in science or technology. They outline these two themes as follows:

a) The History of the Prime Mover

This study should be logically divided into three periods:

1.) The control of natural energy sources
2.) The Steam Engine
3.) The central station power plant and electrical power transmission.

It will start with man's earliest use of natural energy sources and end with a brief look at the future.

The first period in the history of the prime mover will begin around 4000 B.C. when man first rode a horse, and will end around 1475 with the last significant advance in the design of windmills. In this period, man learned to make use of natural sources of energy (animals, man, wind, water) and developed a complex technology employing all kinds of mechanisms for production, transmission and utilization of power. The earliest mechanisms were used in conjunction with water pumping and flour milling operations, while later developments were in conjunction with metal working and textile manufacturing (spinning and weaving). The use of water wheels was extensive toward the end of this period; the Domesday Book states that there were 5,000 water mills in England around 1100.

Some of the devices and mechanisms of this period are still in use under conditions comparable to those in 18th and 19th century England. It would be useful to photograph both the devices in use and the living standards of the cultures still using them. Working scale models are also available in various museums. One can readily show that at the end of the period between 1475 and 1750 the increasing complexity of these devices was making their operation impractical. The complexity was a result of man's almost futile efforts to overcome the limits of the natural energy sources he had learned to utilize. Models of Polhem's inventions, available in Sweden, could be used to illustrate this complexity; e.g., mechanical linkages transmitting power from water wheels overland for distances of about a mile.

In addition, fundamental considerations of solid mechanics, fluid mechanics, and the technology of the period (in which there was no steel or large pieces of wrought iron) limited the practical output of individual water wheels and windmills to about 8 and 14 horsepower respectively. A power output of 8 horsepower for eight hours is the equivalent to that of about 8 large work horses or 96 men working in perfect harmony for an eight hour period. It would be worthwhile to illustrate the difficulty of extracting a steady 8 horsepower from animal or manpower and some of the mechanisms devised to accomplish this virtually impossible feat.

The second period begins about 1700, since between 1475 and 1700 no significant improvements in the use of windmills or water wheels were made. This period in the history of the prime mover is concerned with man's effort to control the entire energy conversion process and make himself independent of weather, climate, duration of natural energy sources and power level limitations. The first successful attempt is the development of the steam engine, which involved a large number of men. Some of the more important men were Savery, Newcomen, Watt, Evans, Trevithick, and Corliss. Savery and Newcomen might be called inventors because they assembled the necessary ideas and actually built steam engines, but Watt was an innovator as well as an inventor, because he conveyed his ideas in such a way as to make the steam engine important. Fulton, who most of our students think invented the steam boat, invented nothing. He bought his steam engine in England. However, he might be classified as an innovator as he introduced the idea of a steam boat to this country.

The use of steam to operate toys and gadgets precedes the Christian era. Some references indicate that steam powered devices (doors, idols) were employed by priests. Descriptions of steam engines appeared long before Savery built the first operating engine in 1698. Savery's pumping engine, intended for, but not very well accepted by mines, employed steam, but not a piston and cylinder. It made use of a) atmospheric pressure, as did the later so-called atmospheric or common steam engines, and b) the expansive power of steam, as did the much later high pressure steam engines. It was reinvented in Germany in the late 1880's as the pulsometer.

In illustration of the difficulty of making this first engineering synthesis, Savery had to be aware of such facts and ideas as:

1. steam is not a form of air (1615 - de Caus)
2. atmospheric pressure (1643 - Torricelli)
3. vacuum
4. pressure increases when water is divided in a closed container
5. a safety valve (1681 - Papin)
6. vacuum could be created by condensing steam

The early engines of Savery, Newcomen, and later, Smeaton, were used for pumping water from mines, on landed estates, for cities and for running water wheels. With them man controlled the entire energy conversion process for the first time. We would like to show with original data and documents (e.g., the costs of feeding horses and men) that, even though the early engines had efficiencies of less than one percent, they were in some cases economically competitive and in other cases allowed men to do something that had ceased to be feasible (operating deep mines).

In approximately the order of application, the other early engines were used for: municipal water supplies, flour and malt mills, metal working and textile manufacturing.

Dodd estimated that in Great Britain in 1818 there were 100 steam engines of an average size of 15 horsepower. Operated 12 hours daily this was equivalent to 225,000 brewers horses, which would require 1,237,550 acres of land for support. This same land supported 2,475,000 people or 1/7 of the population in 1818.

The third period in the history of the prime mover begins around 1870 with the central station power plant and the ability to transmit electrical power over relatively long distances. This era allowed everyone to have his own steam engine in the form of an electric motor.

b) The Steam Engine as an Outgrowth of and an Impetus to Other Technological Developments and Problems.

In this theme we would like to show how various needs, discoveries, and developments result in the development of the steam engine. We will discuss such matters as:

1.) The conventional and inadequate methods of pumping water out of mines around 1770.
2.) No further advances in the development of water and windmills were possible until 1850, in California, when steel and better gears were employed, and the early 1900's when progress in aerodynamics permitted more effective design of windmills.
3.) Large groupings of people required pumped water supplies and waste disposal systems as the result of advances in public health.
4.) Millers and brewers required large sources of power.
5.) Textile machinery, developed prior to and concurrently with the steam engine, required large blocks of power just when Watt and Bolton made it available.
6.) A transportation system of roads and canals was developed that made extensive trade and the movement of large volumes of raw materials and fuel feasible.
7.) The patent was introduced.
8.) Machine tool developments made Watt's Engine possible. The first one was sold to Wilkinson after he had bored the cylinder for it.
9.) Metallurgical progress made high pressure steam engines possible. This was the break through that made engines small, reliable and relatively inexpensive.

In connection with the main themes just outlined, a variety of educational materials will be used. These will include film strips, movies, drawings, transparent working models of several steam engines, extracts of pertinent documents and books, reproductions of engravings, steam engine inscriptions and appropriate connecting text material. The first collection of material will be tested and evaluated during the summer of 1965 in a summer workshop for about twenty-five high school students in the Boston area. On the basis of the results of such experimental classes, additional films and models will be prepared and an experimental 5-10 week sequence in the Steam Engine Story made ready for distribution to about 1,500 students for further testing. In 1966 a summer institute for preparing 30 teachers to teach the material will be organized.

This concludes our presentation of the materials concerning the Steam Engine as a technological device. We move now to the second major unit under the rubric "The Impact of Technology and Science", that part of the course in which the student is introduced to the social changes associated with the Industrial Revolution. And this brings us to what we have been calling the Manchester Unit, which has been developed by Professor George Homans, with the assistance of Professor Robert L. Wolff and others.

2. Manchester: Causes and Consequences of the Industrial Revolution

The Manchester Unit will study the way in which society adjusted to the new technology. The unit is not designed as a history of Manchester; it uses Manchester as a case study of causes and consequences of the Industrial Revolution.

Manchester is chosen for two reasons. A study in depth is more valuable than a coverage of "facts". This is the basis of the whole social studies curriculum reform. Manchester was chosen instead of London, Birmingham, Pittsburgh, or Chicago because it was the first great industrial city. London had commerce, government and finance; Birmingham remained a city of small artisan workshops until much later in the century and does not pose the same clear cut problems in either labor of local government. Pittsburgh's and Chicago's development came much later with the new immigrant problems, and both had the example of Manchester to rely on in working out solutions to new problems. Therefore, Manchester has been chosen as the archetypal industrial city, although it is not that in every respect.

There are three objectives of the Manchester Unit. One is to show the causes of the revolution that brought about today's society. Why did Manchester become the great "Cottonopolis" of the nineteenth century? What were its advantages over other cities? Where did the labor force that manned the factories come from, and what were they looking for? What were the developments in spinning and weaving that made the application of steam to machinery profitable? Where did the capital come from? The student should see that similar questions may be usefully posed about his own society. Why is Appalachia a depressed area, or why is the population of America shifting to the west?

The second objective of the unit is to show the student that many of the problems with which he must deal in the 1960's, 70's, and 80's and which he considers to be purely twentieth century problems first arose in the nineteenth century as a result of the Industrial Revolution. We hope to show the student that his world is based largely upon the solutions the nineteenth century found for these problems.

The third objective is to show the student that there is a variety of attitudes about man's social condition and that these attitudes change. The problems which the student will soon have to face--increased leisure time, government welfare, civil rights, to name a few--are sometimes difficult for him to consider in their twentieth century context; he is too close to them. When, however, these problems are seen in an historical context, he can make the necessary correlation with his own world. He will see, for example, that automation so-called is not an altogether new phenomenon, for on one occasion, automation arising out of the Industrial Revolution put 240,000 Manchester loom workers out of jobs. He will see how the poverty of the English worker led to certain political demands, and how these demands in turn led the manufacturer to plead for freedom from government control. He will see how and why factory legislation arose and therefore how and why a sphere of life which had been considered private became a public concern. He will see how public welfare programs were formed and fought in nineteenth century England. And seeing all these things, the student will come to realize that some of our contemporary social problems are not only continuous with those of the nineteenth century but also subject to similar regularities of human behavior.

These are some of the topics with which the Manchester Unit will deal. Others have to do with the actual growth of a large metropolis. How did a government set up to rule a small market town of about 1,000 people deal with a population that increased from perhaps 4,000 in 1711 to 95,000 in 1801 and 300,000 in 1840? What did it do about water supply, disease, sewage, fires, food supply, housing, lighting, police? Were these private or public enterprises? What were the arguments for and against each, and how was a solution, if there was one, arrived at? Surely these problems still confront us in one form or another.

In order to introduce the student to these problems in a concrete way, we have prepared a collection of materials which are structured by the following schematic outline.

I. Introduction: The Factory System and the City
  1. Pictures of Manchester by contemporaries.
  2. Social problems of the city.
  3. Discipline of the factory.
  4. Problems for the family.
  5. How is the factory system justified?

II. What Preceded the Factory System: The Domestic or Putting-Out System
  1. Division of labor.
  2. Combination of farming and manufacturing.
  3. Disadvantages of the putting-out system.

III. How the Factory System Got Started: "The Take-off"
  1. East India Company and the Turkey Company: how cotton first came into England.
  2. Desire for cotton: increase in demand.
  3. Acts forbidding use.
  4. Failure of supply.

5. Attempts to remedy.
6. The inventions.
7. The first mills.
8. Application of steam power.
9. Why S. Lancashire good for manufacturing.

IV. Industrial and Political Tension

1. Tom Paine and The Rights of Man.
2. Repression under Pitt.
3. The Luddites.
4. The hand-loom weavers: automation and dislocation.
5. An early strike.
6. Blanketeers.
7. Peterloo.

V. Response

1. Trade unions.
2. Parliamentary reform.
3. Chartism.
4. Repeal of Corn Laws.
5. Factory legislation.

In order to give some more specific idea of how these themes are to be dealt with, it might be well to give a running account of the treatment of item I. in the above outline. Under that heading we have included readings of source material about the introduction of the factory system and the sudden urbanization of that city. Graphic contemporary descriptions of the filth, noise, poverty and general unattractiveness of the city are accompanied by brief contrasts between Manchester and the more salubrious conditions of the countryside and of older, more civilized cities. These are followed by social comment of contemporary critics (de Tocqueville and Engels) about the single drive of Manchester being the pursuit of money, and about social disorganization, and the increasing division in society between factory owners and workers. After this section it is proposed that there be discussion of such concepts as "class" and "social patterning". Next there is a discussion of what the introduction of power-driven machinery involved in terms of saving human labor, reducing the movement of materials, and introducing the new discipline by which factory workers had to operate. First-hand accounts are given of the factory life of an apprentice and journeyman, and a novelist's description of life in the factory and factory housing. Next, after the presentation of excerpts from a debate in the House of Commons about factory conditions, descriptions of a "good" factory and a "bad" factory are given for contrast. Finally there are two accounts of the effects of factory life on members of a family.

Besides discussing the content of these materials and the general concepts about "class" and "social patterning" it is proposed that there be more general discussion about the reasons why workers were willing to crowd into the new factories of Manchester, and about the biases of the various writers of the documents.

It will be evident that the treatment of these materials involves a blend of fact and social generalization. And as the student deals with these materials he may well be stimulated to ask what the evidence is for simple, factual statements about Manchester and also what the evidence is for those generalizations about social change that emerge from his discussions of Manchester. Here is where he will be given an opportunity to raise, in an anticipatory way, many of the questions that will be taken up in a more unified way in the philosophical section planned for the end. However, before he can profitably enter that more systematic methodological discussion it will be necessary for him to be exposed to other kinds of material, some of the most important coming from our discussion of one of the most profound intellectual scientific contributions of the nineteenth century--Darwin's theories.

3. Darwin and Darwinism

We have now completed an account of that part of our course which deals, in concrete, with the relationship between technology and society, and are about to turn to an illustration of how a scientific theory can affect its age. We are also rising in the scale of abstractness--from the steam engine to the social relations of Manchester, to the even more abstract theorizing of one of the great minds of the age. Yet even though Darwin's theory is relatively abstract, we treat it in a course on the nineteenth century because it had profound impact on other parts of the society in which it emerged. Indeed, it might be argued that it had more effect on the general public and the wider intellectual world than any of the great scientific ideas of modern times, including those of Galileo, Newton and Einstein. By concentrating on it, we will be able to communicate to the student the social significance of theoretical science, and view it not merely as an aid to technology but as a force in the general culture of the period, both high and low. Today, when science is coming to play a greater and greater part in our lives, it is highly desirable that our high school students come to see it as an intellectual adventure and a social force. Like the steam engine, Darwinian theory requires no familiarity with mathematics and little immersion in technical terminology. Darwin's basic concepts and his reasoning are relatively simple, and yet his inquiry may serve as a paradigm of scientific method. As a result, his work provides a rare opportunity for the teacher of social studies. The teacher can approach it on several different levels, all of which are potentially exciting. With his students, the teacher may examine the background of the theory, its content, its cultural impact, and its logic.

In presenting the background of Darwin's theory we think it illuminating to get the student to see that the theory emerged in a situation in which there were forces that inhibited as well as favored its emergence. This will help us communicate some idea of the dynamics of scientific revolution, to point out that scientific ideas are, to some degree, historically conditioned, affected by extra-scientific factors. In particular we shall lay stress on certain philosophical and theological factors that helped and hindered the emergence of Darwin's contribution. The most powerful inhibiting forces were traditional theological doctrines of the creation of independent species. Biblical material will be used to illustrate creationism, theological writings will serve to explain the argument from design, and philosophical texts will be read in connection with the doctrine of species as subsistent forms or immutable universals. Perhaps the most striking and widely accepted version of the argument of design at the beginning of the nineteenth century was presented by Paley, who wrote: "I take my stand in human anatomy," and who insisted upon "the necessity, in each case, of an intelligent designing mind for the contriving and determining of the forms which organized bodies bear." It will take a little more effort to find material that will illustrate the metaphysical idea of the fixity of species; perhaps a reading from Plato will do. Immutability and design are central to the views that stand in Darwin's way and therefore we must try to show how he pits the concepts of mutability and natural selection against these ancient doctrines in one of the most fascinating intellectual contests of all times.

Darwin was not alone in his struggle. The past provided him with powerful and indispensable support in science and philosophy. Even the lay reader has been exposed to a variety of evolutionary thinking in the immensely popular Vestiges of Creation by Robert Chambers. Then there were Darwin's more properly biological forerunners, the supportive ideas in Lyell's Principles of Geology, and Malthus' writings on population, which Darwin credited with so much influence on his thinking. These will provide material that will help to present the idea that great scientific discoveries are encouraged as well as impeded by the predecessors of a great scientific thinker. Darwin, like Newton, stood on the shoulders of past giants who supported him, even if his path was blocked by scientific, philosophical, and religious ideas that preceded his own.

Although we do not plan to present the student with as detailed a concept of Darwin's theory as he might get in certain biology courses, it is important to communicate the content of the theory, quite apart from its background and impact. In helping him understand it we hope to exploit the student's interest in biography and dramatic action, to capture his interest and to hold it by treating the theory as one chapter in "the evolution of an evolutionist"--to use the title of the 1959 centennial Darwin exhibit at the Museum of Natural History in New York City. To this end we have collected appropriate readings from Darwin's major writings, mainly from The Beagle Diary, The Origin of Species, The Descent of Man, the Autobiography, and the Life and Letters. We try to select passages from The Beagle Diary, the Autobiography, and the Life and Letters that show how the theory began in Darwin's mind, how it progressed, how it met obstacles, how it overcame them, how it led to scientific, philosophical, and religious doubts, and how it led to the intense pleasure of discovery. We try to dramatize the effect of the theory on its author, his wife, his friends, his enemies and his reviewers. Here we may think of the image of a pebble, or a boulder, dropped into a lake and producing wider and wider waves within Darwin's immediate circle, culminating in the famous Oxford Meeting of the British Association for the Advancement of Science, where Bishop Wilberforce and Huxley, "Darwin's bulldog," met in heated intellectual combat over the theory.

After grasping the theory, the student must be helped to see how the waves of influence traveled beyond Darwin's immediate circle in the England of the 1860's and affected the life and thought of the society as a whole. Here we think of Darwin's theory primarily as a stimulant of pro and anti-Darwin views in areas outside of biology, so that the student will develop some sense of the controversial nature of the theory's impact on thought, all the way from religion, which is closest to popular consciousness, to metaphysics. Between these extremes are the effects on ethical theory, sociology, anthropology, history, psychology, political and social theory, etc., particularly in America where pragmatists like James and Dewey were especially devoted to Darwin's ideas.

One of the things we shall stress is the way in which a scientific idea or the words of a great scientist can be warped into the service of a political view that the scientist did not espouse, and even into the service of a view that he rejected. This is true of much of what is called Social Darwinism. Darwin's biological theory, like Newton's theory in an earlier age and Einstein's in a later period, provides an excellent opportunity for a discussion of such use of discoveries in natural science. Moreover, the Darwinian theory is remarkable not only because it influenced cognitive intellectual activity of the sort that one finds in ethics, politics, and social science, but also because it influenced literary expression in the nineteenth century.

With these general aims in mind, we have divided our reading materials into three sections: Pre-Darwinian, Darwinian, and Post-Darwinian.

The Pre-Darwinian material listed here gives the student some idea of the use of the argument from design, as in the writings of Paley, and also an idea of Malthus' views. Eventually we may also include material from Darwin's biological and geological forerunners, but now, as we have indicated, we think of the Pre-Darwinian material as setting the stage in a general intellectual way for the theory of natural selection, as revealing the theological and philosophical background against which the theory may be profitably viewed by students of history.

The bulk of the Post-Darwinian material is intended to give the student a survey of different reactions to The Origin of Species and an understanding of the many different ways in which Darwin's thought impinged on the nineteenth century. The Post-Darwinian units are listed according to general subject matter, but we have not yet addressed ourselves to the problem of temporal order. Later in our work we shall articulate in further detail the structure of this material as we view it. In what follows we indicate the works from which we have made excerpts.

I. Pre-Darwinian
  - A. William Paley, Natural Theology.
  - B. Thomas Robert Malthus, Essay on the Principle of Population.

II. Darwiniana
  - A. Early life of Darwin as recorded in the Autobiography.
  - B. Beagle Diary.
  - C. Beagle Journal.
  - D. Darwin's experiments mentioned in the Life and Letters.
  - E. Darwin's views on religion mentioned in the Autobiography. and the Life and Letters
  - F. Darwin's theory of Natural Selection in selections from The Origin of Species and The Descent of Man.

III. Post-Darwinian
  - A. Immediate reactions to The Origin of Species.
    1. Response of Darwin's relatives from the Life and Letters and Emma Darwin: A Century of Family Letters, edited by Henrietta Litchfield.
    2. Response of Darwin's intimate friends from Life and Letters, and More Letters of Charles Darwin.

3. The meeting of the British Association in 1860, as reported in the Athenaeum, 1860; The Natural History Review, 1861; MacMillan's Magazine, 1898; Letters of John Richard Green; Life and Letters of Thomas Huxley; Life and Letters of Joseph Hooker.

4. Selected reviews of The Origin of Species:

    a. Athenaeum, author unknown, November 19, 1859.

    b. London Times, Thomas Huxley, December 26, 1859.

    c. The Spectator, Adam Sedgwick, March 24, 1860.

    d. Quarterly Review, Wilberforce, Bishop of Oxford, July, 1860.

    e. American Journal of Science, Louis Agassiz, July, 1860.

    f. Athenaeum, Asa Gray, August 4, 1860.

B. Darwin's Influence

1. Anthropology

    a. Thomas Huxley, Man's Place in Nature.

    b. Alfred Russel Wallace, "The Origin of Human Races and The Antiquity of Man," London Anthropological Society's Journal, 1863-64.

    c. Alfred Russel Wallace, "An Exposition of the Theory of Natural Selection and Its Applications to Man," Darwinism.

    d. Thomas Huxley, "On the Methods and Results of Ethnology."

2. Sociology
    a. Albert G. Keller, Societal Evolution.
    b. J. B. Haycraft, Darwinism and Race Progress.
    c. C. Bougle, "Darwinism and Sociology," in Darwin and Modern Science, edited by A. C. Seward.
3. Politics
    a. Walter Bagehot, Physics and Politics
    b. David G. Ritchie, Darwinism and Politics.
    c. Anton Pannekoek, Marxism and Darwinism.
4. Ethics
    a. W. K. Clifford, "The Scientific Basis of Morals," The Scientific Basis of Morals and Other Essays.
    b. Herbert Spencer, Data of Ethics.
5. Linguistics
    a. Charles Lyell, "The Origin of Languages and Species Compared," The Geological Evidence of the Antiquity of Man.
6. History and the Philosophy of History
    a. J. B. Bury, "Darwin and History," in Darwin and Modern Science.
    b. William James, "Great Men and Their Environment," in The Will to Believe and Other Essays in Popular Philosophy.
7. Literature
    a. George Eliot, The George Eliot Letters, edited by Gordon S. Haight; Silas Marner.

8. Education
    - a. Matthew Arnold, "Literature and Science."
9. Philosophy of Science and Theory of Knowledge
    - a. Karl Pearson, The Grammar of Science.
    - b. John Dewey, "The Influence of Darwin on Philosophy," in The Influence of Darwin on Philosophy and Other Essays in Contemporary Thought.
10. Religion and Theology
    - a. Leslie Stephen, "Darwinism and Divinity," Fraser's Magazine, 1872.
    - b. P. N. Waggett, "The Influence of Darwin on Religious Thought," in Darwin and Modern Science.
    - c. William Jennings Bryan, "God and Evolution," reprinted in Evolution and Religion, (Amherst Pamphlet Series).
    - d. Harry Emerson Fosdick, "A Reply to Mr. Bryan in the Name of Religion," also in Evolution and Religion.
    - e. Arthur Garfield Hays, "The Scopes Trial," also in Evolution and Religion.
    - f. Edmund Gosse, Father and Son.
11. Psychology, Racism, and Allied Topics

    Selections in preparation.

We realize that this is an ambitious proposal, but we are convinced that it is good to aim high and to retreat only when pedagogical experiment dictates a retreat. We also realize that our material may present difficulties for certain teachers, and therefore even though Educational Services Incorporated is not in the business of training teachers on a large scale, we think we should supplement our efforts at reforming the tools of education by trying to re-train, to some degree, the main user of those tools, the teacher. To this end we hope to establish summer institutes at which teachers, under the direction of scholars, can acquaint themselves with the relevant material, concepts, distinctions, and ideas that we are introducing in the course. We also think it would be desirable in the more technical sections of the course, like those on the steam engine and on Darwin, to encourage joint teaching programs in which, for example, a biology instructor comes into the class at the appropriate moment to cooperate with the teacher of social studies. This will not only aid instruction, it will vividly present to the student the idea that history is not utterly divorced from science in its method, that, in particular, evolutionary biology has a certain methodological kinship with history in spite of their many differences. And this sort of thing may form a basis for further cooperation in the section on philosophy at the end of the course. If the adult intellectual world is polarized into two cultures, we might try to nip that sort of polarization in the bud at the level at which it begins, the high school.

Two Other Parts of the Curriculum Are Sketched

It will be recalled that our course as now planned is to contain three main sections: 1) the impact of technology and science on society, 2) the relationship between ideology and reality, and 3) philosophical reflection on the nature of the social studies. As we have indicated, sections 2) and 3) have not been worked up in detail, but we think it desirable to say something about them in order to round out our discussion.

Memorandum II, which was quoted earlier, gives a general idea of what we plan to do in section 2) and how it is related to the material in section 1). The distinguishing feature of 2) is not simply that it will treat the theoretical foundations of Democracy, Communism, Fascism and lesser "isms," but that it will try to do so by studying the relationship between those ideologies and the social worlds that spawned them, responded to them, disappointed them, or abandoned them.

Here we list some possibilities. The student will have been introduced to some of the relevant social conditions in his studies of the Industrial Revolution and this may well serve as a point of departure for the introduction of this topic. For example, we might try to show how socialist doctrine begins to emerge at the end of the eighteenth century with utopian socialists like St. Simon, Fourier, and Owen, and then compare their ideas with the various efforts to establish socialist communities in the nineteenth century. We might study the so-called scientific socialists, Marx and Engels, and trace the development of their doctrines through Lenin and Stalin to the point where we could deal with the Russian Revolution as the real expression of that ideology. Alternatively, in keeping with some of the impulses to do "World History" we might even, with the proper scholarly guidance, if we can find it, do something with contemporary China. We might trace the rise of fascist doctrine from its seeds in certain nineteenth century thinkers to Mussolini, Gentile, Rocco, and Palmieri, and once again do so in connection with a study of Italy as it actually was. Analogously, we might do similar things with Nazi Germany. And of course we might deal with classic defenses of democracy, choosing the doctrine of natural rights and the theory of the social contract if we deal with the French Revolution; the utilitarianism of Bentham and Mill if we choose to focus on the nineteenth century British situation; the views of certain gradualistic socialists if we deal with, say, contemporary England. Finally, we might apply a similar technique to the study of an appropriately chosen slice of American history. All of these are very live possibilities.

Which of these things we should do is not settled, since, it should be repeated, this is one of the least developed parts of the curriculum, and will require a great deal of work to bring it up to anything like the level of what has been done on the impact of science and technology. And the same should be said about the third section on philosophy which is probably the most daring of all our departures from the conventional curriculum. Let us turn to that philosophical section now.

In the course of study as developed through the section on ideology and reality the student will have been introduced to substantive problems in history but, by virtue of the fact that we will have put considerable emphasis on the study of intellectual history and on the role of generalization in history, he will also have been exposed to other branches of knowledge. He will, we hope, have developed some idea of mechanics in his study of the steam engine; some idea of what biology is like from his study of Darwin; some feeling for theological argument in the pre-Darwinian material; and of course, considerable acquaintance with the behavioral and social sciences in so far as some of their principles have been made explicit in the discussions of Manchester in particular. Moreover, he will have been introduced to those vast units of thought, value and emotion that are called "ideologies." And having been introduced to all these forms of human expression, thought, or language, he is now in a position to be persuaded to ask himself the following sorts of questions: What is history? What are the social sciences? How are they related? How do they compare with, or what role, if any, do they play in the construction of ideologies of the kind considered in the second section? In short, the student is now in a position to begin serious philosophical reflection about the inquiry in which he has been actively engaged for a very long time. He will be doing philosophy in a concrete way. Let us try to show how concrete such a study can get by taking the material studied and using it as the occasion for reflection.

Once the student comes to this part of the course with a grasp of Darwin's contribution, we can try to sharpen the distinction between the fact of evolution and the explanation of it that is represented by the theory of natural selection. "What is a scientific explanation?", we may ask. In turn, this will allow us to consider the role of law or generalization in explanation, since a theory like that of natural selection is a law, and Darwin thought that one of his great contributions was to extend the sway of law to human phenomena. Next, we can take up the difference between causal and teleological explanations and try to show the difference between Lamarck's view that new needs experienced by the animal lead its "inner feelings" or subconscious activities to produce new organs to satisfy those needs, and Darwin's theory that natural selection is responsible for the changing of the species. In this discussion the student will be led to see why the so-called doctrine of final causes has been the bugbear of modern science, why, for example, the postulation of goals toward which the organism strives cannot explain the evolution of plants, even if it might wrongly have been thought that it could explain the development of animals.

Continuing this discussion of explanation and law, there will also be an opportunity to contrast and compare the dynamic laws of Darwinian theory with the static laws that are appealed to in other branches of science. In turn, this will lead to a very important question which can be made concrete to the student of history who has just been exposed to Darwinian biology: Is there a fundamental difference between explanation in history and the social sciences, and explanation in the natural sciences? Continuing with a closely related question, we may ask whether biological explanation is fundamentally different from explanation in the natural sciences which do not deal with living things.

Finally, we can examine the nature of historical narrative and historical interpretation. The student will have been exposed by now to the difference between factual statements and value judgments, and he will certainly have been exposed, in one way or another, to the idea that history is a statement of "how things really are," and that value judgments should be studiously eliminated from the historian's operations. But it will be easy to convince him that much historical interpretation is made from a point of view that is dominated by the values of the historian, at which point he can be gotten to ask himself about the degree to which history can be purely factual and objective. By this time he will have been introduced to the fundamental questions of the philosophy of history, namely, "What parts do generalization and value judgment play in historical investigation and writing?" and "How objective can historians be?" And by the time he has been induced to think about those questions, and to try at least to answer them, he will, we think, have completed a very exciting, profitable course of study. It would be anti-climactic but true to say that the materials for this last part of the course are as yet unprepared. But the task of preparing them is one that we gladly accept and one that we think that we can accomplish with some success--given enough time, money, talent, and good will.